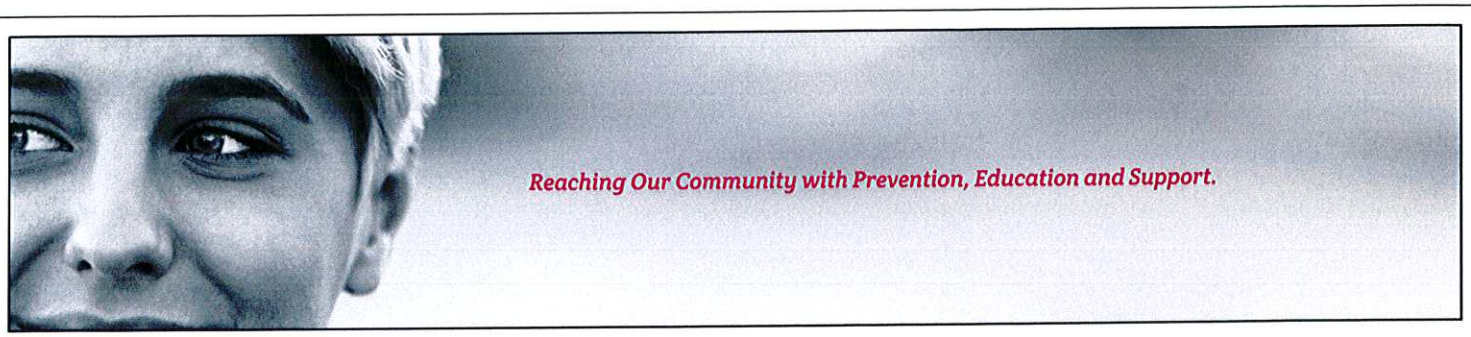
HAMILTON COUNTY
HEROIN COALITION

Hamilton County Heroin Coalition

Strategic Action Plan

Presented to the Hamilton County Board of Commissioners
September 28, 2015

Last Updated: September 28, 2015



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Don't Let Addiction Define You.

INTRODUCTION

Hamilton County and the entire region is suffering from a dramatic uptick in heroin and opiate abuse that is impacting the public health and public safety of virtually all of our local communities. Analysis of arrest data, 9-1-1 calls, drug-related crimes, individuals seeking treatment, disease diagnoses and other statistics all reveal that while Hamilton County is not alone in battling the scourge of heroin and opiate abuse, we are facing an epidemic that requires swift and impactful efforts.

The heroin and opiate epidemic has shown that utilizing only traditional approaches to eradicate drug abuse won't be effective without additional coordination between the many entities dealing with its impacts. As a public safety issue as well as a threat to the health and well-being of our community, Hamilton County's response must connect law enforcement with treatment providers, prevention experts with first responders and public health officials with emergency room doctors.

As the largest metropolitan county in the region, Hamilton County has a responsibility – and a unique opportunity – to provide regional leadership on this issue. We have been able to take advantage of the progress already under way in Northern Kentucky and in our surrounding Ohio counties, and we have brought into the fold the many local entities, organizations and initiatives, large and small, that are working every day to make an impact in their communities. Specific recognition is due to Interact for Health, which has helped the entire region with its opioid response in Northern Kentucky and its assistance to Hamilton County.

Without the hard work by the faith-based community in churches and neighborhoods, the loved ones appearing at their local municipalities' meetings, and the families printing resource guides in their own garages, we might not know the full weight of this scourge – and how we can help.

Under the leadership of Commissioner Greg Hartmann and the Board of County Commissioners, the Hamilton County Heroin Coalition can take to scale Countywide many of the efforts seeing success. Continued collaboration and coordination is the most impactful way to leverage limited local resources effectively.

The purpose of this Strategic Action Plan is to present the guiding, official document for Hamilton County's collaborative, action-oriented work that will make an immediate and long-term impact on the heroin and opiate abuse epidemic in our region. As a major policy priority of the Board of County Commissioners in 2015, and guided by the important work by the Interact for Health Response to the Opioid Epidemic Workgroup [Attachment A], the Hamilton County Heroin Coalition's strategies are designed to comprehensively address this issue through four organized responses:

1) Supply Control
2) Prevention and Public Education
3) Harm Reduction
4) Treatment

This Action Plan is intended to serve as a living document to be updated regularly as new information is presented and we continue measuring the outcomes of our efforts.

COALITION MEMBERSHIP

Coalition aims to pool resources to fight heroin

Dan Horn, dhorn@enquirer.com *10:46 p.m. EDT April 29, 2015*

Part of the problem with Hamilton County's growing heroin epidemic is that it's hard to tell just how big of a problem it is.

Everyone knows it's there, but no one sees the big picture: The Hamilton County Justice Center houses as many as 9,000 heroin addicts a year. The morgue reported 177 heroin overdose deaths last year. Police officers and firefighters encounter addicts every day buying drugs, passed out in cars or stealing to feed their habit.

(Photo: File photo)

- *Coalition Chair*: **Commissioner Greg Hartmann**
- **Chief Richard Braun**, Cincinnati Fire Department
- **Tim Ingram**, Hamilton County Public Health Commissioner
- **Jim Schwab**, President and CEO, Interact for Health
- **Chief Tom Synan**, Newtown Police Department, Hamilton County Association of Chiefs of Police
- **Patrick Tribbe**, President/CEO, Hamilton County Mental Health & Recovery Services Board
- **Neil Tilow**, President/CEO, Talbert House

Coalition Partners:

Ann Barnum, Interact for Health
Cincinnati Police Department
Hamilton County Prosecutor Joe Deters
Ohio Attorney General Mike DeWine
Nan Franks, Addiction Services Council
Mary Haag, PreventionFirst
Hamilton County Fire Chiefs' Association
Deanna Hoskins, Director, Hamilton County Office of Reentry
Dan Meloy, Colerain Township Public Safety Director
Hamilton County Sheriff Jim Neil
County Coroner Dr. Lakshmi Sammarco
U.S. Attorney Carter Stewart
University of Cincinnati Medical Center
Moira Weir, Hamilton County Job & Family Services

Regional Partners:

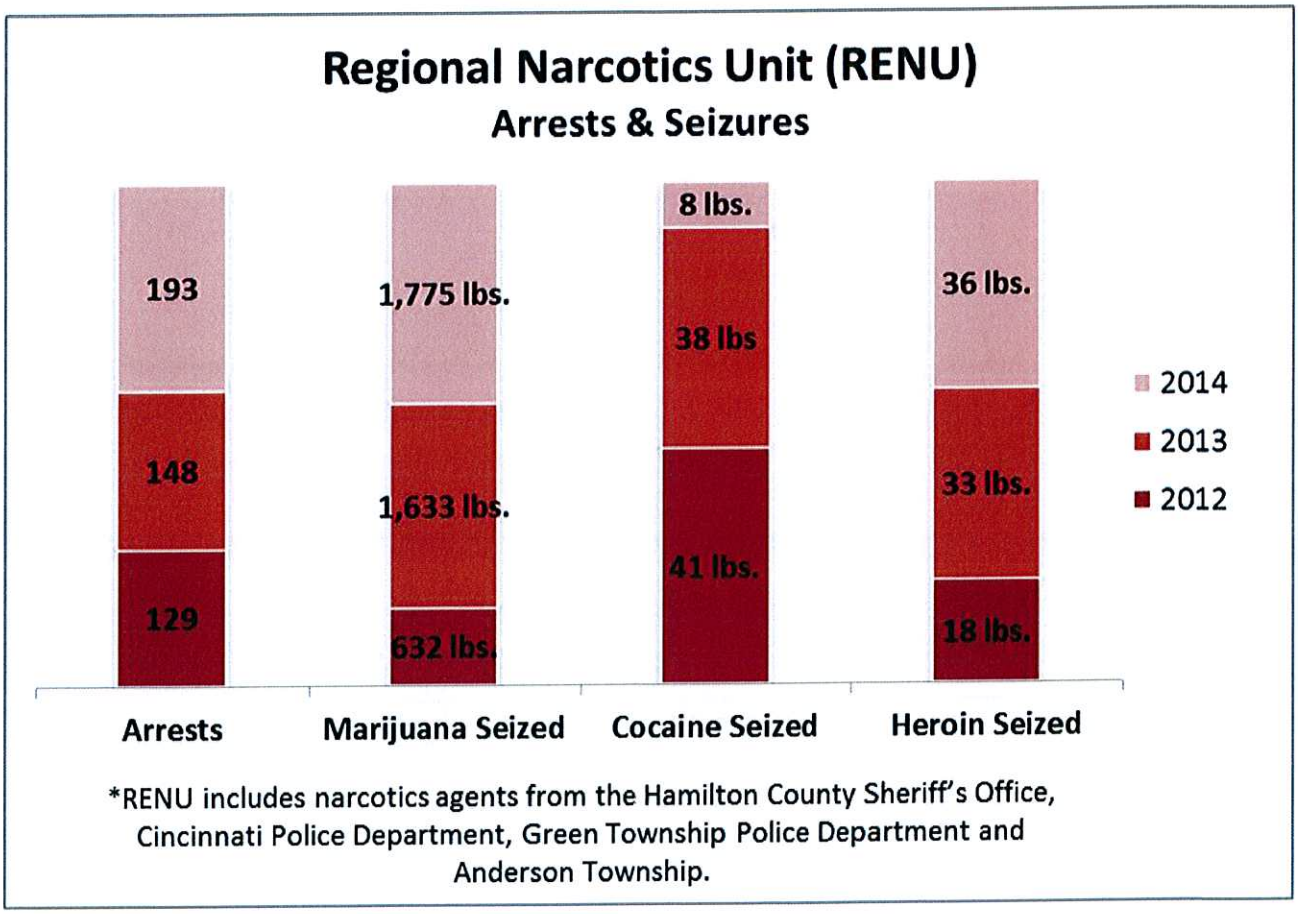
Butler County
Clermont County
Capt. Mike Hartzler, Greater Cincinnati Fusion Center
Northern Kentucky Independent District Health Department
Northern Kentucky Office of Drug Control Policy
Warren County

Impact Area: SUPPLY CONTROL

The Problem:

The heroin and opiate abuse epidemic, like other widespread substance abuse, has a detrimental impact on the safety of our communities. The trafficking, sale and use of drugs causes an increase in other crimes, monopolizes the resources of law enforcement and puts at risk the public safety of our entire County.

- In 2014, 10,000 heroin addicts came through the Hamilton County Justice Center. *(Source: Hamilton County Sheriff's Office)*
- Hamilton County saw 177 heroin-related deaths in 2014. *(Source: Hamilton County Coroner's Office)*
- The amount of heroin seized by the Regional Narcotics Unit (RENU) has increased annually since 2012.



Heroin Coalition Action Steps:

- **Heroin Task Force Investigators**
  Led by the Police Chiefs' Association's Heroin Task Force, ten investigators on loan from several law enforcement agencies in the County and state are utilizing existing County space to track and investigate heroin-related incidents, including trafficking, arrests and overdoses.

  COST: $96,970 to provide County space and equipment for the investigators. A portion of this cost has been reimbursed through a grant from the Ohio Attorney General's office. The cost of the investigators' time has been donated by the individual law enforcement agencies.

- **Greater Cincinnati Fusion Center**
  The County has provided the necessary staff members and technology upgrades to equip The Greater Cincinnati Fusion Center with the ability to track heroin overdoses, arrests and related crimes in an attempt to track heroin and opiate crime "hot spots" in the region.

  COST: $ 45,676 to fund the salary of the Fusion Center analyst, a County employee.

- **Regional Narcotics Unit (RENU)**
  The Regional Narcotics Unit is a multi-jurisdictional drug task force comprised of narcotics agents from the Hamilton County Sheriff's Office, Cincinnati Police Department, Green Township Police Department and Anderson Township. RENU investigates criminal organizations and individuals responsible for the illegal trafficking of controlled substances in the region, and assists local, state and federal law enforcement agencies as needed.

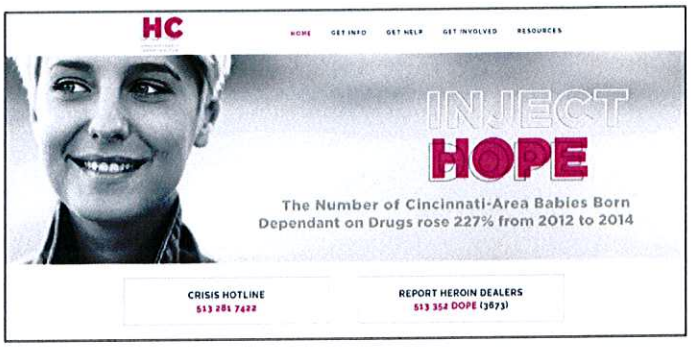
  COST: $0 additional to Hamilton County.

- **Advocacy for legislative changes at the state and federal levels.**
  The Coalition and its partners will advocate for stronger laws at the state and federal levels to allow for additional arrests and stiffer penalties for those convicted of trafficking and supplying heroin and opiates, especially for those incidents of overdose deaths.

  COST: $0 to Hamilton County.

Impact Area: PUBLIC EDUCATION AND PREVENTION

PreventionFIRST!
GUIDING COMMUNITIES TO A VIBRANT FUTURE



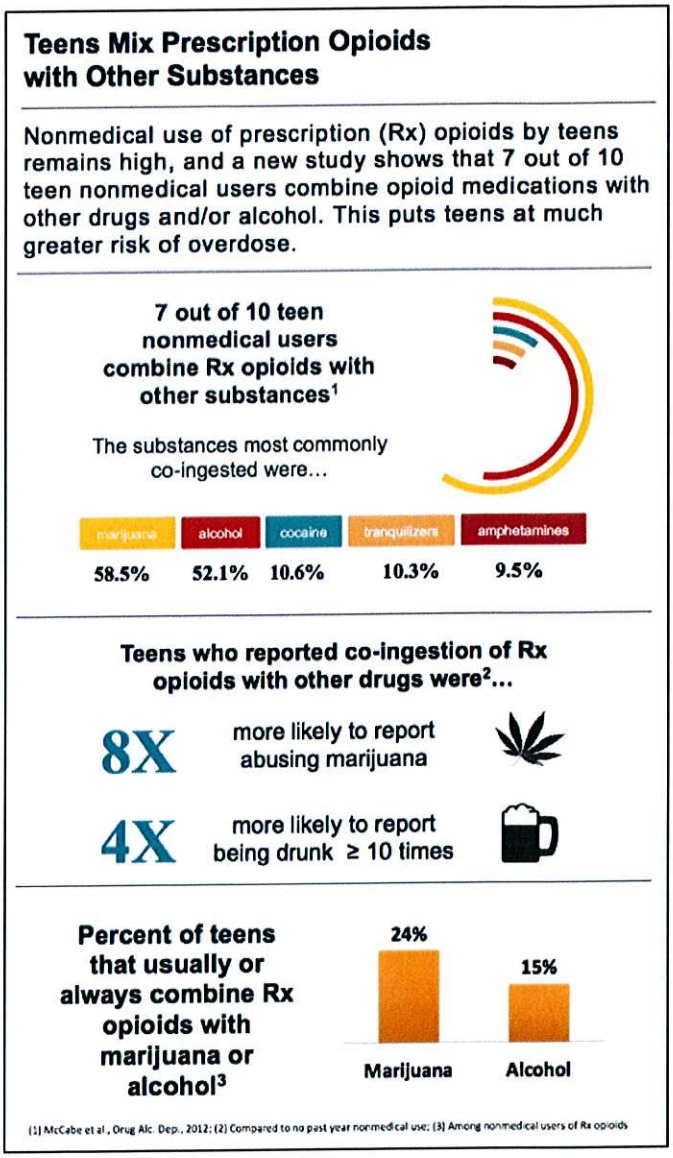
HAMILTON COUNTY
PUBLIC HEALTH
PREVENT. PROMOTE. PROTECT.

The Problem:

The families and loved ones of opiate abusers continue to struggle with resources and information to help connect individuals to treatment and support services. A multitude of organizations in the region providing treatment-related services can be confusing for families to navigate and the courts system and law enforcement officers have equal frustration with connecting users to treatment and assistance.

Additionally, in the past several years, the number of organizations dedicated to educating youth and preventing drug abuse before it begins have dwindled, due in large part to the economic downturn and the reduction in funding to continue such programs. Effective, impactful messaging and education to the families and youth in Hamilton County is critical to our prevention efforts.

- The average age for youth in Greater Cincinnati to try alcohol, tobacco, marijuana or prescription pills is 13.3 years old. *(Source: PreventionFIRST! 2014 Student Drug Use Survey, [ATTACHMENT B])*
- According to the National Institute on Drug Abuse, young people are highly susceptible to combining opioids with other drugs, leading to a much greater risk of overdose.

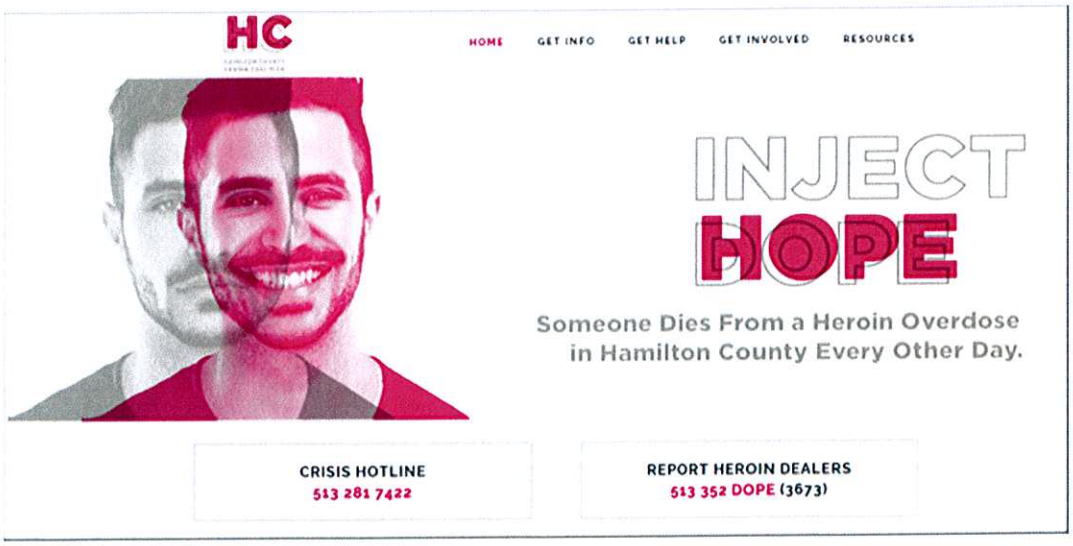


Heroin Coalition Action Steps:

- **Interact for Health "Response to the Opioid Epidemic" [ATTACHMENT A]**
  The ROE Workgroup in March 2015 completed a comprehensive report regarding the state of the heroin and opiate crisis in Hamilton County and potential strategies to be pursued to impact the epidemic.

  COST: $0 to Hamilton County.

- **Hamilton County Heroin Coalition Web site: www.injecthope.com**
  The Coalition developed a Website for local residents to learn more about heroin and opiate abuse, find treatment and assistance, and get involved in combating the epidemic. The messaging and design for the Website was created by Landor, and the Website has been launched by Unstoppable Software.



  COST: $35,000 for Landor messaging and design.
  $12,400 for Website creation, hosting and maintenance.

- **Regional Public Awareness Campaign**
  Utilizing the Landor design and messaging, the Coalition will launch a regional media campaign to alert residents to the availability of treatment and resources, direct them to the Website for more information and help educate the public on heroin and opiate abuse.

  A resource guide, brochure and other printed materials will be developed for distribution throughout the County, including at Hamilton County Job & Family Services and other County facilities.

  Those overdose victims revived by first responders in the County will be given a small card and other information to pursue treatment.

The Police/Fire/EMS revived you with Naloxone.
We care that you survived and care just as much that you are addiction-free.

If you want further assistance, please contact the Hamilton County Heroin Coalition:
(513) 281-7422 or www.injecthope.com.

Additionally, Landor's design and messaging will be shared with surrounding counties (Butler, Warren and Clermont), as well as the Northern Kentucky partners working to address the heroin and opiate epidemic. The Coalition will work with regional partners to pursue a media campaign across the Tri-State that will be most cost-effective with the broadest impact. The campaign strategies and cost will be determined based on grants and funding secured by the Coalition.

COST: $50,000 for printing services for a local resource guide, brochure, the overdose revival resource cards, etc.

- **Teen Empowerment Program at Norwood Middle School**
  The Talbert House will continue its Teen Empowerment Program [ATTACHMENT C] at Norwood Middle School this year through a grant from Governor Kasich's "Start Talking" initiative last year as well as assistance from the Mental Health Board. The program identifies youth organizers to help raise awareness about drug and alcohol abuse.

  COST: $0 to Hamilton County.

Ohio drug overdose deaths up sharply

Jona Ison, Gannett Ohio *3:12 p.m. EDT September 24, 2015*

(Photo: Matthew Hatcher/The Marion Star)

Fentanyl-related drug overdose deaths increased nearly 500 percent across Ohio in 2014, according to preliminary data released by the Ohio Department of Health today.

The increased presence of fentanyl, an opiate that is 30 to 50 times more potent than heroin, was a significant contributor to a nearly 18 percent increase in overall overdose deaths in 2014. Of the record-breaking (/story/news/2015/04/30/fatal-overdoses-break-ohio-record/26663261/) 2,482 overdose deaths, 502 of them involved fentanyl.

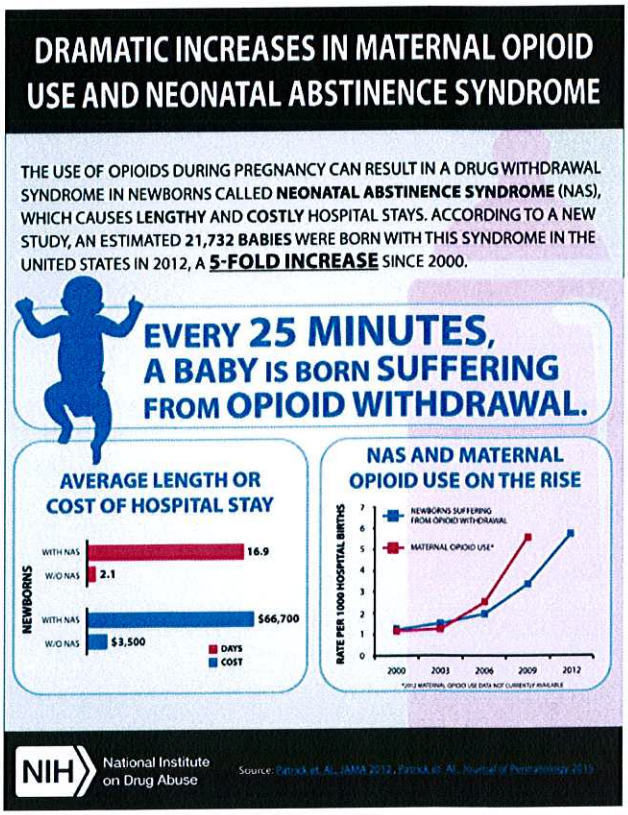
"At the same time we are experiencing positive progress in our fight against drug addiction, such as fewer opiates being dispensed and a decrease in high-doses of opiates, we are also seeing some individuals begin to use more dangerous drugs to achieve more intense effects," said Dr. Mark Hurst, medical director of the Ohio Department of Mental Health and Addiction Services. "As they build up tolerance to drugs they're using, they may progress, for example, from prescription pain pills, to heroin, to fentanyl, which is often cut into heroin."

The Problem:

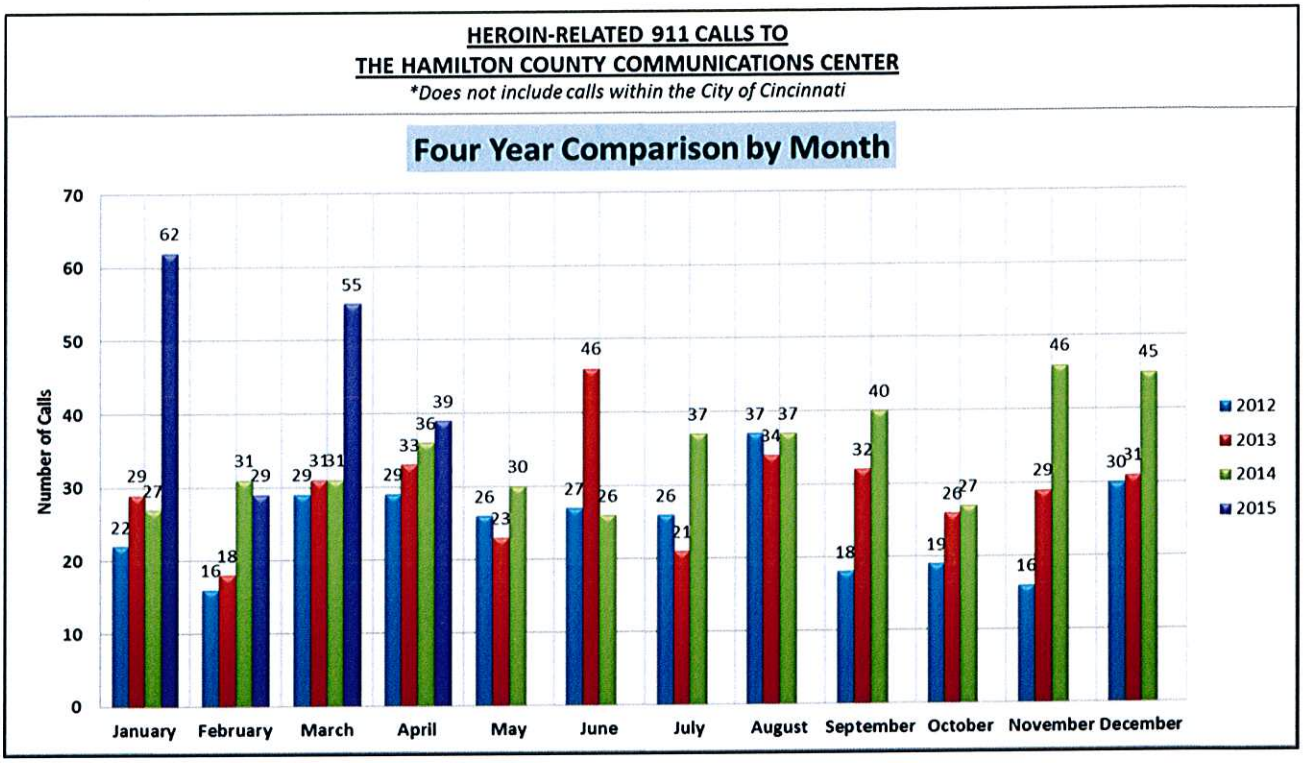
The heroin and opiate abuse epidemic impacts the quality of life and public health of the entire community. Overdoses, including those that result in death, are increasing dramatically across the state. Repeated drug abuse also creates additional health problems in users and their families, including needle-related diseases such as hepatitis C and HIV.

Increasing access to life-saving drugs that prevent death by overdose, as well as a focused effort by the public health and medical community to prevent diseases caused by needle and drug use, is critical to increasing the chances of successful treatment and improved quality of life for users and their loved ones.

- 70% of children age 1 or younger in foster care in Ohio have parents with an addiction to opiates and cocaine. *(Source: Public Children Services Association of Ohio, [ATTACHMENT D])*
- The number of Cincinnati-area babies born dependent on drugs increased 227% from 2012 to 2014. *(Source: Greater Cincinnati Health Council)*
- The treatment protocol for hepatitis C costs approximately $100,000 annually. *(Source: The C. Everett Koop Institute, Dartmouth Medical School)*
- The Cincinnati Fire Department received 791 overdose emergency calls in 2014, up 25% from 2013.



- The County Communications Center received 413 calls to report suspected heroin overdoses in 2014



Heroin Coalition Action Steps:

- **Increasing Law Enforcement Access to Narcan**

  The Sheriff's Department has been allocated funding to purchase Narcan in 2015 for deputies, and the cost will be built into the budget for 2016 (about $20,000). To date, 25% of Sheriff's deputies have received training in the use of Narcan and have begun deploying its use. The Department has already seen seven successful interventions of an overdose using Narcan.

  In 2016, Narcan will be purchased and allocated to all Countywide law enforcement agencies to ensure that first responders and police officers have immediate access to this life-saving medication. The Ohio Attorney General's office will provide free training for all law enforcement officers to administer Narcan, as well as offer rebates to law enforcement entities to discount the purchase of Narcan.

COST: $20,000 approximate cost for the Hamilton County Sheriff's Department.
$150,000 approximate cost for Countywide law enforcement access.

Colerain police to carry Narcan to reverse heroin overdose

Jennie Key, jkey@communitypress.com 4:06 p.m. EDT September 1, 2015

(Photo: Jennie Key/The Community Press)

Colerain Township is taking another step in its assault on heroin abuse, putting Narcan in its police cruisers this week.

Narcan, or Naloxone, offers immediate help by restoring breathing for anyone overdosing from the use of an opiate pain medicine such as OxyContin or heroin.

Dan Meloy, Colerain Township public safety director, says the police and fire department collaborated to make the drug more available to first responders. All police officers have been trained how to administer the nasal spray so they can administer immediate assistance while waiting for emergency medical personnel to arrive. The program starts Sept. 4.

Narcan acts in two to five minutes, restoring breathing stopped by the overdose. It wears off typically in 30 to 90 minutes, and the person can stop breathing again without additional Narcan or medical intervention.

- **Advocacy for public availability of naloxone for purchase over-the counter.**
  A recent state legislative change allows the public sale of naloxone over-the-counter. The Coalition will encourage all pharmacies, especially Walgreens, CVS and Kroger, which are the biggest in our region, to carry and make available to the public naloxone over-the counter, in order to prevent overdose deaths and save lives.

  COST: $0 to Hamilton County.

- **'Quick Response Team'**
  Colerain Township began a pilot project on July 1, 2015 to deploy a "Quick Response Team" to follow up with overdose victims after the initial contact to encourage the pursuit of treatment and addiction services. The QRT is a partnership of first responders and the Addiction Services Council. The success of this Colerain team will be replicated in other law enforcement agencies countywide.

  Since the QRT's deployment, 100% of the overdose victims who received face-to-face follow-up from the QRT team within five days of the overdose are now in treatment. Additionally, Colerain has reduced overdoses by 33% since May 2015.

  COST: $34,000 in personnel costs to Colerain Township, plus capital cost for QRT vehicle and equipment. Costs to implement in other communities would likely be similar, and would be funded by those individual townships, cities and villages. Hamilton County will assist in locating and securing grant funding for these costs.

- **Colerain Township Pilot Program to Combat Bloodborne Pathogens**
  A pilot program in Colerain Township is in its planning phases to decrease the amount of bloodborne pathogens affecting heroin and opiate users through public education and assistance.

  COST: $50,000 to Hamilton County.

- **Hamilton County Public Health - Healthcare Opiate and Heroin Response Committee**
  Under the leadership of Hamilton County Public Health Commissioner Tim Ingram, a Committee has been formed of the chief medical leadership at each of the local hospital systems to discuss and incorporate treatment protocols and standards of care in the hospital facilities and emergency rooms.

  COST: $0 to Hamilton County.

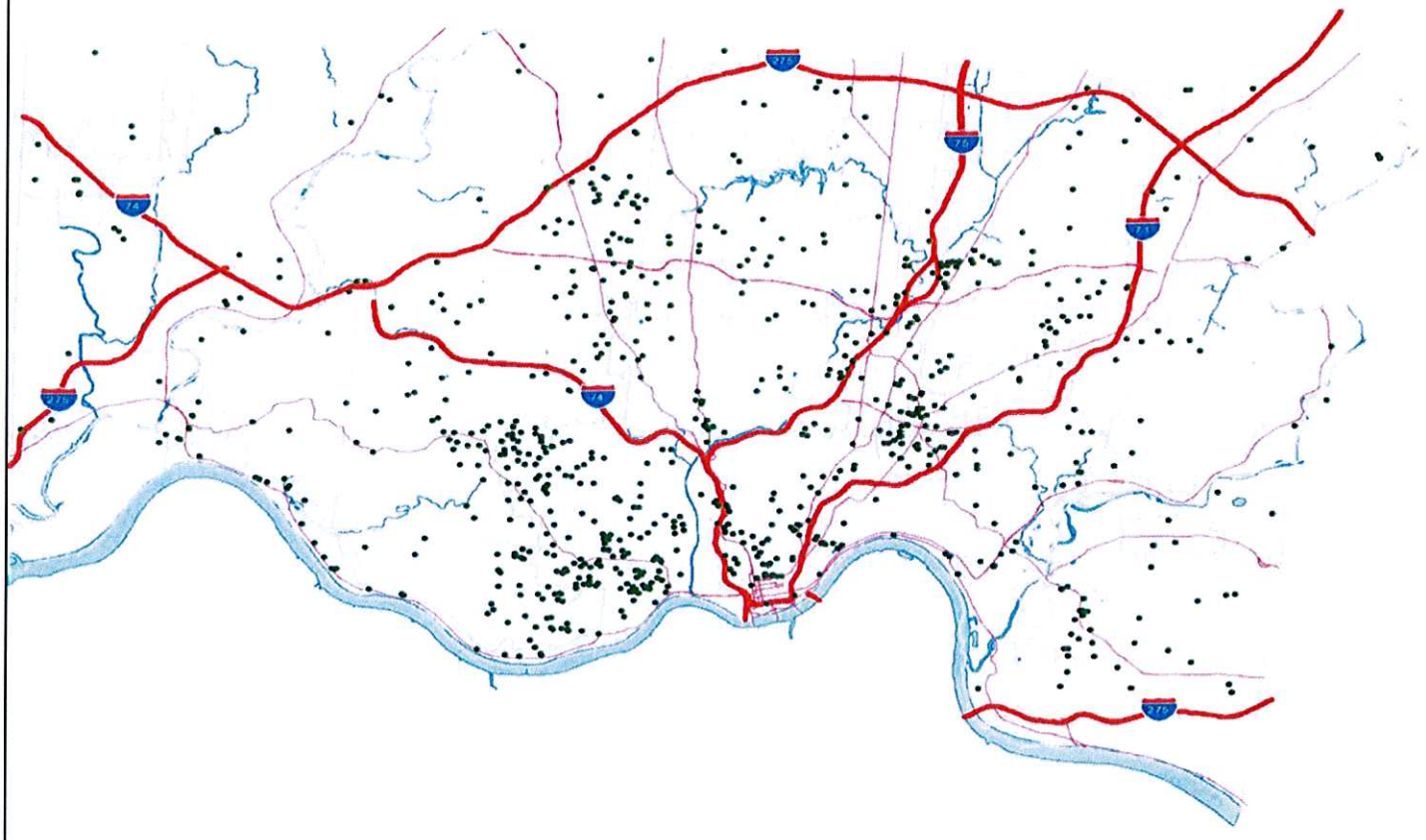
Impact Area: TREATMENT

The Problem:

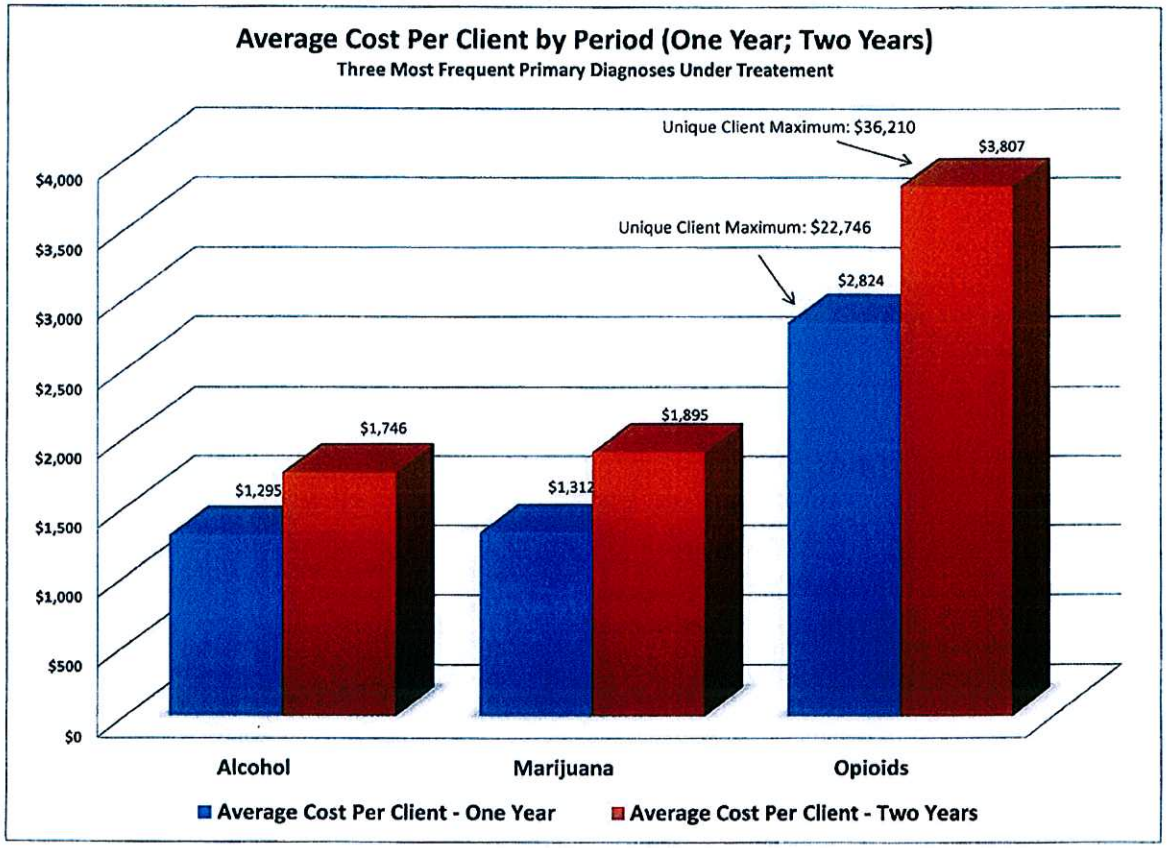
The most important impact area for addressing heroin and opiate abuse is treatment. Access to detox, treatment and recovery services is the critical component to making a large-scale impact on the heroin epidemic.

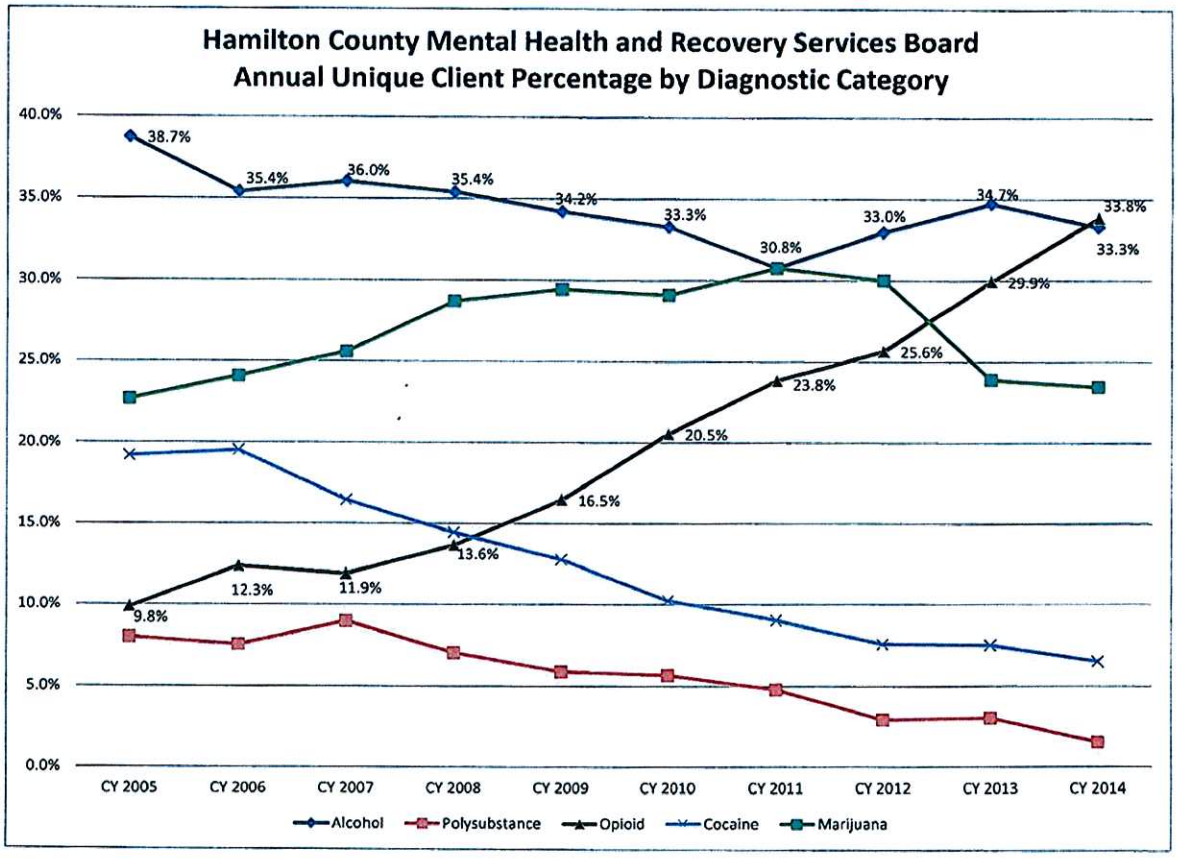
- According to the Hamilton County Mental Health & Recovery Services Board (MHRSB) [ATTACHMENT F], primary diagnoses of heroin and opioid use for those individuals seeking treatment are widespread throughout Hamilton County, with residents of virtually every township, city and village.

Dispersion of Opioid/Heroin Primary Diagnoses
Hamilton County

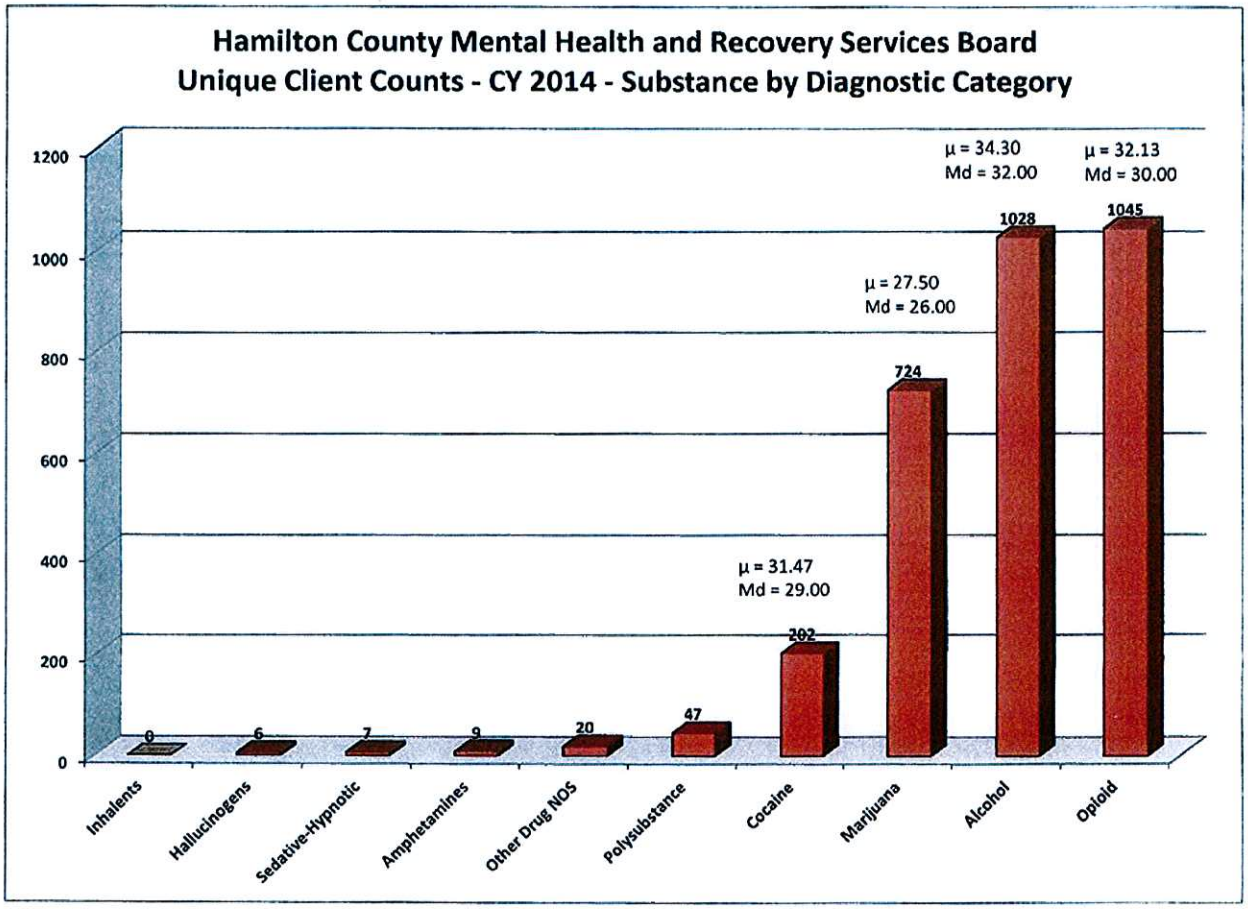


- The cost of treating heroin and opioid use and the number of individuals seeking treatment is increasing each year.





- In 2014, individuals seeking treatment through MHRSB with opioid diagnoses surpassed those seeking treatment for alcohol, marijuana or any other substance.



Heroin Coalition Action Steps:

- **Advocacy for legislative changes at the state and federal levels.**
  The Coalition and its partners will advocate for stronger laws at the state and federal levels to allow for additional state and federal funding and resources for treatment in local communities.

  COST: $0 to Hamilton County.

- **Increase capacity for treatment in Hamilton County.**
  Under the leadership of the MHRSB, the County network of substance abuse treatment providers has brought forward a recommended treatment plan to expand the availability of treatment, detox and recovery services in the County [ATTACHMENT G]

  A proposed total increase of $5.62 million in treatment funding can provide outpatient treatment, medication assisted treatment, methadone and detox services to over 700 additional individuals in Hamilton County.

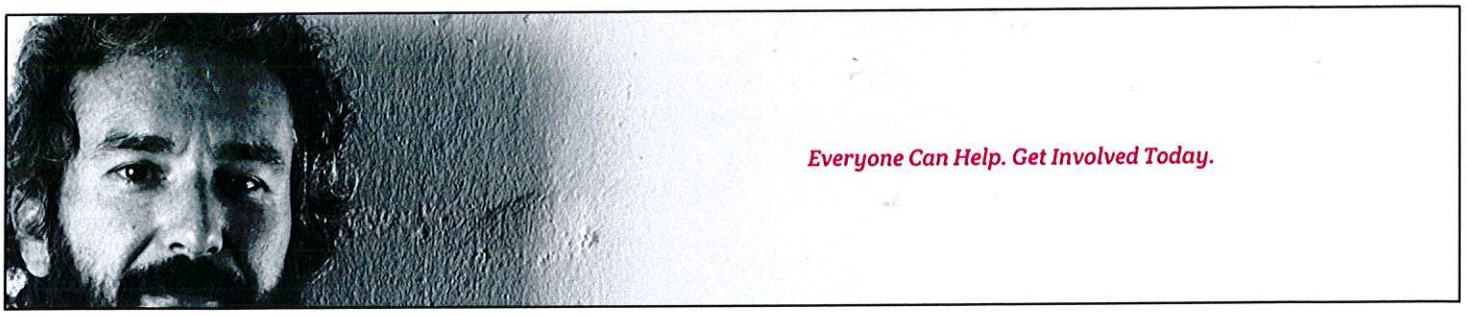
The Coalition's investment of $2.2 million in treatment will leverage $2.75 million in Medicaid/other funding, and $652,000 in MHRSB grant funding (totaling $5.62 million).

Proposed Services and Associated Costs

Opiate Treatment Services	HCHC Funding	HCHC Funding at $1m	HCMHRSB Additional	Total Investment	Medicaid/Other Funded
Assessment	$84,250	$37,887	$52,352	$90,239	$139,599
Lab Urinalysis	$157,104	$4,241	$54,146	$58,387	$197,195
Individual Counseling	$145,640	$0	$60,507	$60,507	$283,342
Group Counseling	$173,463	$0	$108,866	$108,866	$325,787
Case Management	$173,938	$78,220	$41,594	$119,814	$148,436
Crisis Intervention	$23,054	$0	$35,755	$35,755	$20,469
Intensive Outpatient	$174,441	$78,446	$15,079	$93,525	$493,860
Family Counseling	$5,865	$2,637	$0	$2,637	$22,079
Medical/Somatic	$37,629	$16,922	$20,377	$37,299	$111,485
Methadone Administration	$51,353	$23,093	$90,189	$113,282	$358,388
Medication Assisted Treatment	$526,927	$325,041	$0	$325,041	$206,532
Sub-Acute Detox	$376,495	$301,434	$81,509	$382,943	$0
Non-Medical Community Residential	$102,000	$45,869	$91,697	$137,566	$97,189
Room & Board	$191,453	$86,096	$0	$86,096	$345,968
Total Treatment Services	$2,223,612	$999,888	$652,071	$1,651,959	$2,750,329

Approximate Individuals to be Served:	
Outpatient	400
Medication Assisted Treatment	77
Methadone	60
Detox	182

COST: $2.2 million total in 2016 and 2017. The University of Cincinnati Medical Center has pledged $300,000 to these efforts in 2016, and the Coalition is actively seeking similar commitments from the other hospital systems in the County. A discussion of potential County sources of funding for treatment will be included in the 2016 Recommended Budget, as well as upcoming reviews of Countywide property tax levies.



CONCLUSION AND NEXT STEPS

Hamilton County is poised to make a lasting impact on the regional heroin and opiate epidemic through collaborative, creative action steps that connect all of the important entities working to address this issue. In addition to the action items in this Plan, the Coalition will continue to update its work to include best practices from other communities and to bring new partners into these efforts. For example, the Center for Chemical Addictions and Treatment announced in August 2015 its expansion plan to serve an additional 1,000 individuals as the only residential treatment facility in the County.

Hamilton County as an institution must also look internally for ways to join the fight against opiate addiction with the residents and loved ones battling this scourge every day. Sheriff Jim Neil is crafting a proposal to create a detox unit within the walls of the Justice Center to provide a safer, medically-certified environment for those individuals in jail suffering from withdrawal. Sheriff Neil will present his proposal to the Board of Commissioners in late October 2015.

Outcomes and results from the Coalition's efforts will be closely tracked in the weeks and months ahead. Regular updates will be provided to the Board of Commissioners as efforts progress.

A Note of Acknowledgement from Commissioner Greg Hartmann

The Hamilton County Heroin Coalition is a partnership of concerned individuals and organizations with a shared passion for addressing heroin and opiate abuse and the resulting damage inflicted upon our communities. As Chair of this Coalition, I am grateful for the collaboration, expertise and compassion exhibited by all of our Coalition members, partners and supporters.

Thank you for your hard work and commitment to this important endeavor.

ATTACHMENTS

A. Interact for Health Response to the Opioid Epidemic

B. PreventionFIRST! 2014 Student Drug Use Survey

C. Talbert House Teen Empowerment Program Overview

D. Child Welfare Opiate Engagement Project, PCSAO, September 2014

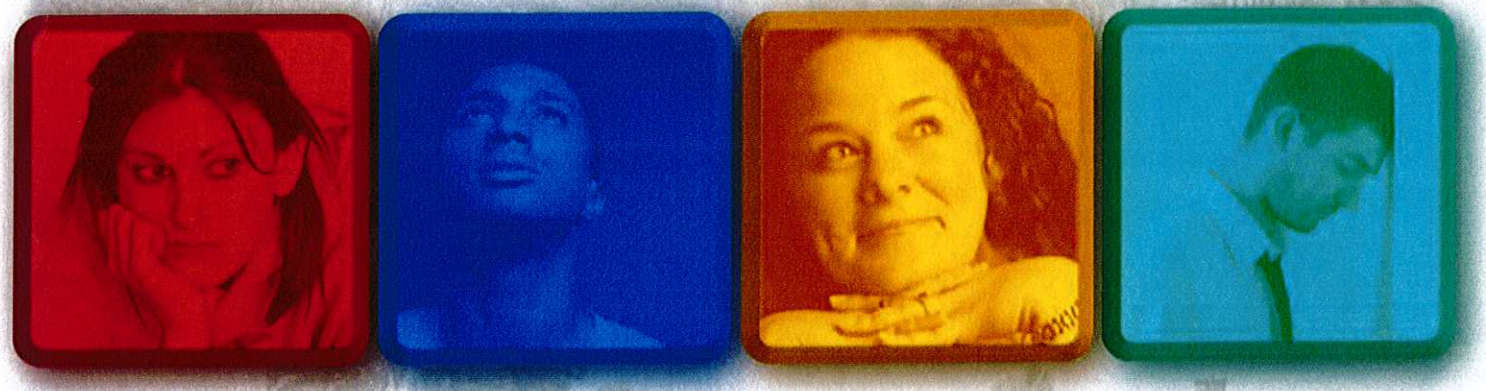
E. 2009-2019 Hamilton County Public Health Hepatitis C Report

F. MHRSB Statistics on Hamilton County Heroin and Opiate Abuse

G. Hamilton County Heroin Coalition Treatment Proposal

H. National Institute on Drug Abuse Research Report: Heroin

REVERSING THE TIDE



Hamilton County's Response to the Opioid Epidemic

MARCH 2015

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ACKNOWLEDGEMENTS

This plan was made possible through the efforts and dedication of the following members of the Hamilton County Response to the Opioid Epidemic (ROE) Workgroup:

Carol Baden	Community Recovery Project
Ann Barnum	Interact for Health
Richard Bozian, MD	SMART Recovery
Camisha Chambers	IV-CHARIS
Heather Dobbins	Hamilton County Sheriff's Office
David Elkins	Jimmy Heath House
William Ebelhar	Talbert House
Steve Englender, MD, MPH	Cincinnati Health Department
Bill Epps	Central Community Health Board
Ivan Faske	Greater Cincinnati Recovery Resource Collaborative
Judith Feinberg, MD	University of Cincinnati
Cameron Foster	Addiction Services Council
John Francis	Talbert House
Nan Franks	Addiction Services Council
Linda Gallagher	Hamilton County Mental Health and Recovery Services Board
Mary Haag	PreventionFIRST!
Libby Harrison	Cincinnati Exchange Project
Aaron Haslam	Frost Brown Todd
Kathy Hill	Cincinnati Children's Hospital Medical Center
Karla Holmes	Cincinnati Union Bethel
Jim Howarth	Delhi Township Police
David Logan	Prospect House
Leslie Mitchell	Planned Parenthood of Southwest Ohio
Jan O'Hair	Cincinnati Health Department
Maryann O'Malloy	First Step Home
Elizabeth Osinbowale	Crossroads Center
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John Roberts	Hamilton County Mental Health and Recovery Services Board
Andrew Ruffner	University of Cincinnati
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Jim Schwab	Interact for Health
Linda Seiter	Caracole
Kathi Strouse	University of Cincinnati
Sonya Strunk	Brighton Center
Maria Sulcer	Gateways Recovery Center
Deb Ulrich, ILCDC-III	Retired Hamilton County probation officer
Angela Vance	City of Cincinnati Police Department
Steve Walkenhorst	Center for Chemical Addictions Treatment
Bart West	Green Township Police
Erin Winstanley	University of Cincinnati
Katrina Wyche	Prevention consultant
Tyrone K. Yates	Hamilton County Municipal Court
Roger Zellars	Prospect House

EXECUTIVE SUMMARY

An opioid epidemic has shattered families and frayed the fabric of Hamilton County communities on an unprecedented scale. Evidence of the epidemic is overwhelming. Consider the following:

- Someone dies from a heroin overdose in Hamilton County every other day. Heroin overdose deaths in the county increased by 72% from 2007 to 2012.[1] Of the 259 people who died from an overdose in 2013, a record 182 tested positive for heroin.[2]
- From 2008 to 2012, Hamilton County had Ohio's 2nd highest rate of county residents diagnosed with opiate abuse, dependence, or poisoning at the time of discharge from the emergency room. The county's rate was 2 times higher than the state average.[3]
- Hepatitis C cases in Hamilton County rose from 721 in 2009 to 1,136 in 2013, a 58% increase.[4] Most of this increase is attributed to the rise of injection heroin use during that time. University Hospital spent almost $6 million on heroin treatment and hepatitis C care during a 10-month period in 2013.[5]
- The number of babies born dependent on drugs in the Cincinnati area rose from 11 per 1,000 births in 2009 to 36 per 1,000 births in 2012.[6]
- A survey of 9,000 clients at addiction treatment centers across the U.S. found that 90% of heroin users were white men and women. Their average age was 23. The data for Cincinnati look very similar.

Someone dies from a heroin overdose in Hamilton County every other day.

The economic impact is profound. Local governments across the U.S. spend about 9% of their local budgets on issues related to substance abuse and addiction of all types.[8] HIV can be transmitted through shared needles, and the estimated lifetime cost to treat one person living with HIV is $379,668 in 2010 dollars.[9] A 2013 article described hepatitis C as "a public health and health care expense time bomb." [10] The average lifetime cost to treat one patient is approximately $100,000.[11] This figure excludes the cost of a liver transplant or Harvoni, the once-a-day pill that just received FDA approval. At the time of this writing, Harvoni cost $1,125 a pill, or $94,500 for a 12-week treatment regimen.[12]

Several factors fuel the epidemic. Opiate painkillers such as OxyContin and Vicodin are much harder to obtain due to cost and to law enforcement efforts to curtail prescription drug abuse. Conversely, heroin is cheap, very potent, and readily available. Ac-

cording to the most recent Ohio Substance Abuse Monitoring Network Report, heroin is "highly available" in the Cincinnati region, with black tar and brown powdered heroin being the most available heroin types.[13]

Yet, while the epidemic grew, public funding for addiction treatment dropped. In fiscal year (FY) 2009, the Hamilton County Mental Health and Recovery Services Board had $18.9 million available to support addiction treatment for county residents regardless of their ability to pay. By FY 2014, this amount dropped to $13.2 million. This reduction was due in part to Medicaid funding being elevated to the state. It is hoped that across the state, Medicaid expansion and the Affordable Care Act (ACA) will be used to help offset this reduction. House Bill 483, signed by Governor Kasich in June 2014, requires local officials to work with the Ohio Dept. of Mental Health and Addiction Services to ensure the availability of services for addicted Ohio residents.

Public funding for addiction treatment dropped from $18.9 million in 2009 to $13.2 million in 2014.

However, Medicaid will not help individuals who need addiction treatment programs, but are not covered by Medicaid. Even with the ACA, many people will not receive sufficient behavioral health benefits to cover their addiction treatment costs, particularly residential treatment. Therefore, other sources of public funding are still greatly needed to assist Hamilton County residents who will not benefit significantly or at all from the ACA and Medicaid. Prevention, harm reduction, housing for individuals in recovery, and supply reduction efforts are under-funded as well.

HAMILTON COUNTY'S RESPONSE

The Hamilton County Response to the Opioid Epidemic Workgroup ("ROE Workgroup") was founded in 2013 to identify and implement evidence-based solutions. This collaborative comprises professionals, several organizations, and concerned citizens from all walks of life.

The ROE Workgroup is already carrying out activities to reverse the tide in Hamilton County. To curb the explosion of hepatitis C, syringe exchange efforts are underway in Mount Auburn and Northside. Interact for Health, a Cincinnati area non-profit, recently awarded grants to increase the availability of naloxone in Hamilton County. Naloxone (a.k.a. Narcan®) is a medication available in injectable or intranasal forms that can reverse heroin overdoses. Providers of treatment and prevention continue to make their services accessible despite severe funding cuts.

To guide current and future activities, the ROE Workgroup is proposing a comprehensive plan to counter the epidemic through four broad areas:

1) GETTING PEOPLE THE TREATMENT THEY NEED: To curtail the epidemic in Hamilton County, more resources must be deployed to sustain existing treatment services, increase capacity, and add new approaches. In addition to increasing capacity, removing barriers to county residents getting help they need must include, but not be limited to:

- Enhancing addiction treatment services through the continued use of evidence-based counseling practices and by making Medication Assisted Treatment (MAT) more available in conjunction with treatment services.
- Strengthening collaborations with mutual help groups such as Narcotics Anonymous and SMART Recovery.
- Increasing the availability of recovery housing for Hamilton County residents.

2) REDUCING HARM: Harm reduction activities in Hamilton County have two main purposes – to stop the spread of infectious diseases and to keep people alive so they can eventually benefit from behavioral health care. To this end, harm reduction activities will include, but not be limited to:

- Adding 10 naloxone distribution sites in Hamilton County to reduce overdose deaths;
- Expanding the Cincinnati Exchange Program to five Hamilton County locations to remove dirty needles from public places and reduce the transmission of infectious diseases; and
- Advocating for the passage of the syringe exchange bill, which will allow local boards of health to authorize or establish syringe exchanges in their jurisdictions.

Fully implementing this plan will require $12,444,500 for one year.

3) PREVENTING OPIOID MISUSE: To reduce the burden on Hamilton County's treatment resources, immediate steps must be taken to prevent residents of all ages from becoming addicted, or progressing toward full-blown addiction in the first place. The required steps include, but are not limited to:

- Informing the public about opiate issues through social media, public service announcements, educational materials and other means;
- Promoting prescription take-back boxes at designated locations to remove dangerous prescription drugs from our community; and
- Increasing the availability of evidence-based prevention programs, policies, and practices.

4) CUTTING THE SUPPLY: The unintended consequences of shutting down the "pill mills" in southern Ohio and overprescribing of pain medication throughout Ohio was the up-surge in heroin usage. Hamilton County's heroin epidemic is attributed partly to its location on the interstate highway system to the trafficking that follows. Recommended activities that cut the supply of illegal opioids and unneeded prescription pain medication include:

- Increasing enforcement of current opioid laws and regulations with a focus on large scale dealers,
- Increasing adherence to prescription drug monitoring programs, and
- Announcing through local media "Take Back" days for unused prescriptions.

Addiction knows no boundaries. As the epidemic has revealed, opioid addiction can happen to people from every conceivable race, ethnicity, income level, and religious background.

Countering this powerful disease requires ongoing collaboration and sufficient funding. Fully implementing this plan will require an investment of at least $12,444,500 for one year. Adequately investing in addressing this problem will produce a cost savings to the community, in addition to saving lives and restoring our families. Every $1 spent on addiction treatment alone will save Hamilton County taxpayers anywhere from $4 to $15, depending on the number of factors taken into consideration.[14] Every $1 spent on prevention can save Hamilton County taxpayers up to $18 in costs stemming from substance use, misuse and addiction.

This plan is a living document. The efforts of the workgroup will continue to prioritize, strengthen, advocate for and revise the strategies contained in this plan.

We are grateful to all who have supported this planning effort since its inception. We look forward to collaborating with many more as we collectively address Hamilton County's most urgent public health crisis.

Ann Barnum

Senior Program Officer, Healthy Choices about Substance Use Interact for Health

To solve a public problem like the current opioid epidemic, it is essential to have a comprehensive plan. Such a plan allows everyone to have a voice. Such a plan takes time to develop and committed individuals who are determined to improve the health of their community. Such a plan provides every person in the community with an action step that they can take to make a difference. All of us are affected by the opioid epidemic. All of us have a role to play in the solution.

Katrina Wyche, M.Ed., OCPS I, ICPS

Wellness and Prevention Services Manager, Urban Minority Alcoholism and Drug Abuse Outreach Program

What we're seeing with heroin has been more explosive than in the past. The Hamilton County ROE Workgroup Plan is a good way to strategically address this issue and to get more organizations on board to support the effort.

BACKGROUND

How Opioids Work

An "opiate" is a narcotic analgesic that depresses the central nervous system. Natural opiates are derived from opium poppy (Papaver somniferum), the species of plant from which opium and poppy seeds are derived. Synthetic opiates, on the other hand, are manufactured drugs designed to mimic the effects of a naturally derived opiate. Together, natural and synthetic opiates are known as "opioids." Today's most common opioids include morphine, codeine, heroin, and prescription painkillers such as Vicodin, Percocet, and OxyContin.

Opioids act by attaching to proteins found in the brain, spinal cord, and other parts of the body. Opioids act on the limbic system, which controls emotions. Here, opiates can cause feelings of pleasure and relaxation. When acting on the spinal cord, opioids can reduce feelings of pain. When acting on the brainstem, if ingested in sufficient quantities, opioids can depress respiration and cause death.

Opioids of all kinds are the focus here. However, the public has been particularly concerned about heroin due to its illegality, its prevalence, its high potential for addiction, and its role in the transmission of hepatitis C and HIV. Heroin is known by nicknames such as Big H, Black Tar, Horse, and Dog. Derived from morphine, heroin can be injected via a needle, smoked in a water pipe, mixed into marijuana or a tobacco cigarette, or snorted nasally[15] Heroin often comes in small packages, and sometimes in small balloons. Since it is frequently mixed with materials and other drugs, buyers do not know exactly what they are buying, which makes the situation even more life threatening.

What Caused the Current Epidemic?

A unique set of factors have converged to fuel the epidemic. A recent *New Republic* article put forth this blunt analysis, "Heroin epidemics don't come and go randomly...They have clearly identifiable causes – and in this case, by far the largest cause is doctor-prescribed pills."[16] Indeed, opiate painkillers are the gateway drugs to heroin - approximately 80% of recent heroin addicts originally used prescription pain pills before turning to heroin.[17]

The increased prescribing of opioid painkillers can be attributed in part to a realization that physicians were under-treating chronic pain, causing unnecessary suffering among patients.[18] A 2000 Joint Commission on Hospital Accreditation report strongly reinforced the concept

of "pain as the 5th vital sign," which had the unintended consequence of many more people being offered opiates than needed them. Around the same time, pharmaceutical companies actively promoted their prescription opioids. The powerful OxyContin prescription painkiller was "marketed [by PurduePharma] in a way unlike any narcotic painkiller before it."[19]

Numerous people became addicted to these prescription drugs. In response, pharmaceutical companies made their painkillers more difficult to crush or dissolve, and government and law enforcement agencies cracked down on the use and distribution of prescription painkillers. This, in turn, caused the price of black market prescription painkillers to rise. One milligram of OxyContin can be sold for as much as $1 on the black market, which means a single 80 mg tablet can cost $80.

Not surprisingly, illegal drug cartels flooded the U.S. with cheap potent heroin, available for a mere $10-$30 per dose (1/10 gram). As a result, the number of people addicted to heroin and other opioids grew rapidly within a few years.[20]

Hamilton County, the state of Ohio, and the Opioid Epidemic

The Hamilton County Response to the Opioid Epidemic (ROE) Collaborative was founded in 2013. This is a collaboration of organizations, professionals, and concerned citizens working together to address the rise is opiate misuse, overdoses, and related infections such as HIV and hepatitis C in Hamilton County, Ohio. The group's mission is to create a safer, healthier and more informed community.

A number of troubling trends in Hamilton County and in the state of Ohio as a whole have been noted by The State Epidemiological Work Group of the Ohio Department of Mental Health and Addiction Services (OH MHAS).[21]

Opioid Related Poisonings – Hamilton County vs. the state of Ohio

Table 1 below includes fatal poisonings involving opioids, methadone, and other synthetic narcotics. Hamilton County showed a significantly higher incidence of opioid related poisonings from 2003-2011.

Table 1: Opioid-related Poisonings per 100,000 population, Hamilton County vs. Ohio[22]

	2003	2004	2005	2006	2007	2008	2009	2010	2011
Hamilton County	5.43	5.43	6.02	6.14	7.36	8.67	7.37	11.22	14.96
Ohio	2.59	3.75	4.27	4.81	5.50	6.37	6.78	8.49	10.00

Source: State Epidemiological Work Group of the Ohio Dept. of Mental Health and Addiction Services

The State Epidemiological Work Group did not have data available beyond 2011 at the time of this writing. However, from 2008 to 2012, Hamilton County had Ohio's 2nd highest rate (28.3 ER discharges per 10,000 people) of county residents diagnosed with opiate abuse, dependence, or poisoning at the time of discharge from the emergency room. The county's rate was 2 times higher than the state average of 14 ER discharges per 10,000 people falling into this category.[23]

Unintentional drug overdoses have accounted for the highest percentage of deaths in Ohio since 2007.[24] Drug overdoses among Ohio women have risen 448% from 2000 to 2012, and the rate of drug overdoses among Ohio men quadrupled during the same time period.[25] Officials attribute many of these deaths to opiates.

Heroin Poisonings – Hamilton County vs. State

Again, compared to the rest of the state, Hamilton County had a significantly higher rate of fatal heroin poisonings through 2011. See Table 2 below.

Hepatitis C

Hepatitis C is an infection of the liver caused by the hepatitis C virus. It can result in a serious lifelong illness that may involve cirrhosis and cancer. The hepatitis C virus is spread primarily through contact with the blood of an infected person. Most people with an acute hepatitis C infection go on to develop chronic hepatitis C. An estimated 3.2 million people in the United States are infected with the chronic form.

According to the National Institute on Drug Abuse, people who use injection drugs are the group with the highest risk for contracting the hepatitis C infection. They contract hepatitis C primarily through sharing infected needles with other people who use injection drugs. Hepatitis C can also be sexually transmitted. Each injection drug user infected with hepatitis C is likely to infect 20 additional people.[27] As Table 3 on page 13 reveals, the overall incidence of hepatitis C in Hamilton County has risen every year since 2009. Among county residents ages 15-34, the infection rate increased by 187% from 2003 to 2013. These are the new users of injection

Table 2: Heroin Poisonings per 100,000 population, Hamilton County vs. Ohio[26]

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Hamilton County	.94	1.42	1.06	1.53	.83	2.37	3.28	3.16	5.86	8.72
Ohio	.95	.76	1.14	1.14	1.02	1.27	2.02	2.45	2.93	3.69

Source: State Epidemiological Work Group of the Ohio Dept. of Mental Health and Addiction Services

Table 3: Reported Incidence of New Cases of hepatitis C Among Hamilton County, Ohio, Residents by Age Group and Year of Report – 2003-2013*[28]

Age	Year											
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Total
< 5	4	3	6	4	7	2	4	9	8	9	7	63
5-14	2	7	4	1	2	0	0	5	2	4	5	32
15-24	41	49	53	44	62	50	52	94	100	177	166	888
25-34	114	110	95	115	113	109	126	173	249	267	280	1,751
35-44	396	259	220	172	188	124	97	121	130	152	158	2,017
45-54	731	523	577	363	427	332	208	266	239	219	229	4,114
55-64	172	161	214	151	218	186	176	227	206	241	223	2,175
65-74	68	40	27	37	35	39	29	37	32	38	53	435
75-84	24	11	18	20	23	11	12	3	8	11	7	148
85 +	2	5	1	2	5	2	1	3	3	4	1	29
Total	1,554	1,168	1,215	909	1,080	855	705	938	977	1,122	1,129	11,652

*Confirmed, probable & suspected cases; as reported in the Ohio Disease Reporting System (ODRS) -- data accessed 2/24/14. Age not reported for 248 (2.1%) cases.

Source: Hamilton County Public Health

drugs, not those who could have contracted hepatitis C earlier in their lives.

In addition to the tremendous health implications, hepatitis C has a far reaching economic impact. A 2013 article described hepatitis C as "a public health and health care expense time bomb."[29] The average lifetime cost to treat one patient is approximately $100,000.[30] This figure excludes the cost of a liver transplant or Harvoni, the once-a-day pill that just received FDA approval. At the time of this writing, Harvoni cost $1,125 a pill, or $94,500 for a 12-week treatment regimen.[31]

A study of almost 340,000 workers found that employees with hepatitis C had significantly more work days lost than other employees, resulting in lost productivity.[32] Furthermore, all healthcare benefit costs were significantly higher ($8,352 per year) for infected employees than for non-infected employees.[33]

Endocarditis

Injection drug use is a significant factor for developing endocarditis, an infection (usually from bacteria) of the inner lining of the heart chambers and heart valves. Endocarditis cases increased in Hamilton County from 1999-2009.[34] It is a serious disease requiring weeks of treatment with high dose antibiotics. Even with treatment, endocarditis has an 18% in-hospital mortality rate. People who use injection drugs develop endocarditis due to using needles contaminated with bacteria. The incidence of endocarditis among people who use injection drugs in the United States ranges

from 1%-5% annually. Among people who use injection drugs, endocarditis accounts for 5%-20% of hospitalizations and 5%-10% of total deaths.[35]

In this area, babies born dependent on drugs rose from 11 per 1,000 births in 2009 to 36 per 1,000 births in 2012.

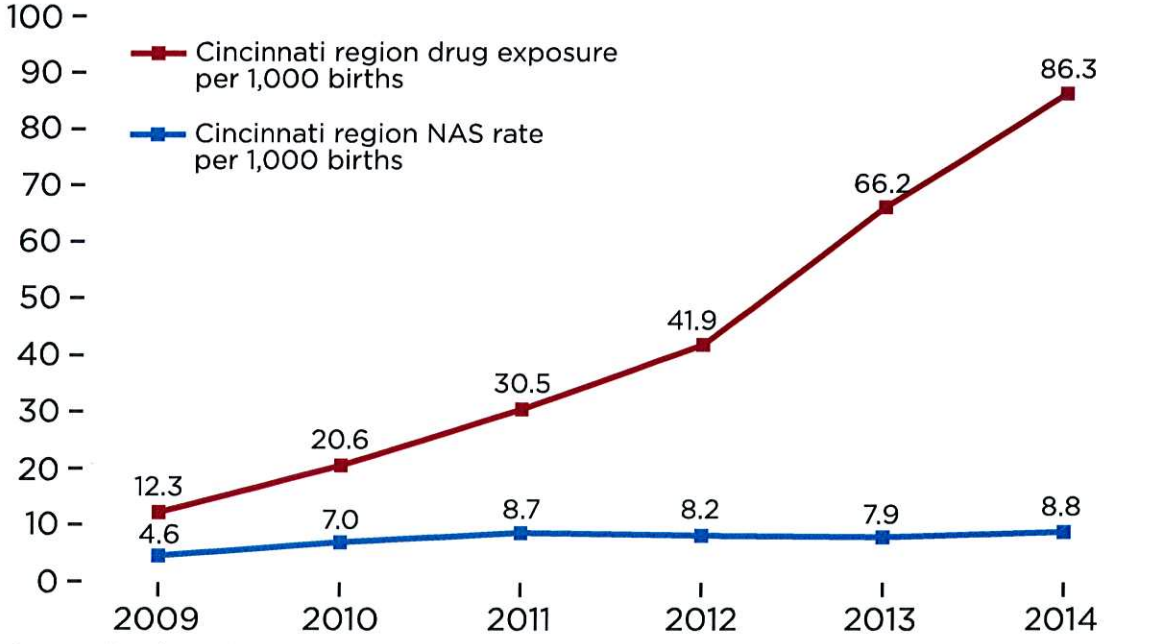
Neonatal abstinence syndrome

Neonatal abstinence syndrome (NAS) is the term used to define a group of behavioral and physiological symptoms that occur in newborn infants born addicted to substances the mother used while pregnant. Between 2004 and 2011, the number of newborns hospitalized in the state of Ohio for NAS increased by a staggering 529%.[36] Locally, the Cincinnati area has seen the number of babies born dependent on drugs rise from 11 per 1,000 births in 2009 to 36 per 1,000 births in 2012.[37] Seven Cincinnati area hospitals documented a six-fold increase in drug exposed infants from fiscal year 2009 through fiscal year 2014, as shown in Graph 1 below.[38]

Unfortunately, there is no delicate way to describe how maternal heroin addiction affects newborn babies. As a nurse told a reporter in 2012, "They are just agitated. They are screaming. They have tremors. Their faces – you have the grimace. They're in pain. Sometimes, the babies have seizures. We hate it. It breaks my heart to see these babies go through withdrawal."[39] Intensive hospital care may take weeks. Although physical symptoms improve after 1-6 weeks, long-term outcomes, particularly those related to learning, health and behavior are currently unknown but assumed to be problematic.

Opioids and first responders

Graph 1: Rates of Infant Drug Exposure & NAS by Year, FY 2009-2014



Source: Newborn Care Associates (Cincinnati Children's)

The opioid epidemic has placed an incredible strain on overburdened law enforcement agencies, criminal justice systems, and fire and rescue departments statewide and locally.

Hamilton County law enforcement agencies face a number of challenges relating to curtailing the influx of heroin into the county. Heroin is typically transported, distributed, and sold in small quantities. The severity of the criminal charge faced by a suspect is based on the amount of heroin bought or seized. Less than one gram of heroin is a 5th degree felony, the least severe felony charge classification. A 4th degree felony involves up to 5 grams of heroin. Both a felony 5 and a felony 4 carry the assumption of probation unless other criminal charges are involved. Due to the small quantities in which heroin is frequently distributed and sold, it can be difficult for law enforcement to build a case for at least a 3rd degree felony charge.

Organized criminals and crime organizations are heavily involved in the heroin trade. Dealers in this category are often not users of heroin or other opioids. For them, the heroin trade is strictly business, and they readily use violence in the course of carrying out their activities.

However, a significant amount of heroin is transported and/or sold by small-time dealers who do use heroin. Often, they are selling part of their heroin supply and keeping the rest for their own use or to share with other users. This type of offender poses a dilemma for law enforcement and criminal justice entities. On one hand, they are selling a drug that can and does kill people. On the other hand, they are often selling to support their own drug habit and need addiction treatment.

According to the Hamilton County Adult Probation Department, there were 51 offenders on community supervision for heroin trafficking in 2013. Just in the first 6 months of 2014, there were 59 offenders placed on supervision for this reason. Hamilton County Pretrial Services investigated 2,668 cases of reported heroin use from 7/1/13 to 7/1/14.

Hamilton County Pretrial Services investigated 2,668 cases of reported heroin use from July 2013 to July 2014

Hamilton County inmates are disproportionately represented in Ohio Department of Rehabilitation and Correction (DRC) institutions, at least in part due to addiction and drug related offenses. In 2013, Hamilton County represented 9.21% of the total commitments to the Ohio DRC[40] but during that same year, Hamilton County represented only 6.95% of Ohio's total population. More than 25% of Ohio DRC inmates from Hamilton County in 2013 were committed because of drug trafficking or drug possession

offenses.[41]

Of Ohio offenders under some form of Community Corrections Act supervision (i.e., prison diversion or jail diversion) in 2013, 36.4% had drug offenses.[42] These statistics do not include cases where opioids were a factor in a non-drug offense.

Between 11% and 22% of adults assessed for child maltreatment had a diagnosis of opiate dependence or abuse.

The epidemic affects law enforcement officers in other ways, too. A study conducted before the onset of the opioid epidemic found that almost 30% of officers surveyed had been stuck by a needle.[43] Risk factors that lead to police officers suffering needlestick injuries include working the evening shift, pat-down searches, and patrol duties.

The opioid epidemic has also burdened the time and resources of fire and EMS departments. In 2013, the Blue Ash Fire Department administered naloxone 20 times to overdose victims. But in the first 6 months of 2014, they had already administered naloxone on 17 occasions.[44] The Cincinnati Fire Department has been administering naloxone, on average, four times per day.

Child Welfare

According to the Ohio Department of Job and Family Services (JFS), heroin was a factor in 6,827 Ohio child custody cases in 2013, an 83% increase from 2010 when there were 3,726 such cases.[45] The average length of time children stay in foster care is 70 days, but when parents are addicted to alcohol or other drugs, that number increases to 300 days.[46] Furthermore, the words "heroin" and "cocaine" appeared in over 17,000 child welfare case reports in 2013.[47]

From February through July 2014, anywhere from 11% to 22% of adults assessed for child maltreatment by Hamilton County Jobs and Family Services (JFS) had a diagnosis of opiate dependence or opiate abuse. Although alcohol and marijuana are more likely to be the problem in the families assessed, the Hamilton County JFS office reports that opiate addiction cases tend to pose the highest safety risk for children.[48]

Prescription Opioids

Prescription opioid misuse and addiction remains problematic despite the best efforts of health care professionals, law enforcement, and others to curtail it.

Many people continue to view legally obtained prescription drugs as "safe," especially in comparison to street drugs. However, opium based painkillers such as Percocet, OxyContin, and Vicodan kill approximately 17,000 Americans annually.[49] Overdoses of these prescription drugs cause

more deaths each year in Ohio than traffic accidents do.[50] More than 12 million people reported using prescription painkillers for non-medical reasons in 2010.[51] These numbers are likely to remain high in the foreseeable future. U.S. health care providers wrote 259 million prescriptions for painkillers in 2012. This is enough for every American adult to have a prescription.[52]

The Ohio Bureau of Worker's Compensation (BWC), the state's insurance program for injured workers, has increased its monitoring of prescription drugs. The BWC will not cover the cost of controlled substance prescriptions for chronic care unless the healthcare provider enrolls in the Ohio Automated Rx Reporting System (OARRS), which monitors the potential misuse of prescriptions.[53] In 2013, the BWC spent approximately one-third of its pharmacy budget on 357,970 opioid prescriptions to 39,028 claimants.[54] At least 70% of injured workers are prescribed opium-based medications.[55]

In their 2014 Drug Use Survey of students in grades 7-12, the Coalition for a Drug Free Cincinnati found that 4.3% of the students surveyed had used prescription drugs not prescribed to them in the 30 days prior to the survey. Of those who admitted to misusing a prescription drug, the average age of students' first use of a substance was 13.3.[56] The average age of students saying they had misused prescription drugs was 13.3. [57] Almost 20% of University of Cincinnati students report using prescription drugs not prescribed to them, and prescription painkillers are among the medications most abused by UC students.[58]

Since it can be tempting for children to try substances that are already in their homes, or in others' homes, police departments in Cincinnati, Norwood, Loveland, Springfield Township, Reading, and St. Bernard now offer drop boxes where citizens may discard their unused prescription medications. Syringes and liquids cannot be put in the drop boxes, though.

Moving Forward

The Hamilton County ROE Collaborative is working to create a safer, healthier and more-informed community.

This plan is a collective response from multiple agencies, entities, and individuals who play a key role in health care, mental health, substance abuse prevention, harm reduction, treatment, public health, law enforcement, and the business community. Through this plan, we aim to strengthen and expand our community resources to advance our mission so that Hamilton County residents

In a 2014 survey, 4.3% of students in grades 7-12 had used prescription drugs not prescribed to them in the prior month.

stop getting sick and harming themselves as a result of opioid misuse.

Implementing the actions outlined in this plan will require ongoing, long-term collaboration between professionals, legislators, law enforcement officials, and concerned Hamilton County citizens. Hopefully, some of the recommended steps will have an immediate effect on reducing the number of overdoses or curtailing the spread of infectious diseases. The implementation of other recommended steps may require more time to make a difference. In any case, carrying out a comprehensive, evidence-based plan of action like the one outlined in this plan will have much more effect than implementing only some, but not all of the recommended steps.

To accomplish our mission, this plan is organized around four broad groups of activities to counter the opioid epidemic in Hamilton County. These four areas are:

1. Getting people access to the treatment they need in a timely fashion;
2. Reducing the harm caused by the opioid epidemic;
3. Preventing opioid misuse; and
4. Cutting the supply of opioids in Hamilton County.

The steps for each area are described in more detail in the subsequent pages of this plan.

From a friend of the Serenity House

The disease of addiction for me seemed purely as a curse while in active addiction and even for a time while in recovery. Today, my perspective is as follows: The disease is considered by me as a blessing...

Using heroin intravenously was the preferred substance and ritual I was consumed by. It led me to lying, violence, crime ... not to mention the complete and utter desperation, hopelessness, and disgust I was imprisoned in. Narcotics Anonymous has been the only solution offered that has worked for me. It has allowed me to open my eyes to the truth about addiction and has changed and continues to change my life for the better as long as I am willing. ...This program has done things for me and my loved ones I had never thought possible.

GETTING PEOPLE THE TREATMENT THEY NEED

Treatment Outcomes:

- More Hamilton County residents will achieve long-term recovery as a result of addiction treatment and related services.
- Fewer Hamilton County residents will overdose on opioids

TREATMENT STRATEGIES

- Increase the capacity of all levels of addiction treatment care, particularly for indigent and underinsured Hamilton County residents.
- Enhance addiction treatment services through the continued use of evidence-based counseling practices and by making Medication Assisted Treatment (MAT) more available in conjunction with treatment services.
- Increase the number of sober housing units available for Hamilton County residents.
- Strengthen treatment providers' collaborations with mutual help groups such as Narcotics Anonymous, Alcoholics Anonymous, and SMART Recovery.
- Make peer mentoring and support more available to people in recovery and for providers of Medication Assisted Treatment.

GETTING PEOPLE THE TREATMENT THEY NEED

Our treatment recommendations are rooted in two assumptions:

#1 - ADDICTION IS A TREATABLE DISEASE: Addiction to alcohol or other drugs, including opiates, is a complex disease, although many still believe addiction is caused by a lack of willpower or by one's morals. Quitting drug use is hard, even if the person wants to quit. This is partly because substance abuse changes the functioning and structure of the brain. In turn, this greatly affects the person's behavior and judgment, and continues to do so long after the person has stopped using drugs.

At least 5,942 county residents need treatment for opioid use. At least 446 (7.5%) will need residential services.

Like many other diseases, there are identifiable risk factors for addiction and there are evidence- based methods for screening and intervention. In this plan, the ROE Workgroup identifies evidence-based practices to meet the needs of those affected by the opioid epidemic.

#2 - TREATMENT IS A SOUND INVESTMENT: For every $1 spent on treatment, taxpayers save $4 to $15, depending on the number of factors studied.[59] Also, most clients need at least 90 days in treatment to significantly reduce or stop substance use, and the odds of better outcomes improve with even longer involvement in treatment.[60]

The consequences of failing to invest in treatment can be disastrous for taxpayers. In 2005, for every $100 of government spending on substance abuse and addiction, Ohio spent a mere $2.21 on treatment, prevention and research *combined*, while spending a staggering $90.44 to deal with the damage caused by substance misuse and addiction.[61]

How many people need help?

Based on data from the Substance Abuse and Mental Health Services Administration[62], there are approximately 48,789 Hamilton County residents who are either dependent on or abusing alcohol, and approximately 19,807 who are dependent on or abusing illicit drugs. Heroin and other opiates were the primary drug of choice for almost 30% of those admitted to Ohio's publicly funded treatment programs in 2012. Based on this statistic, at least 5,942 county residents need some form of treatment for their opioid use and, of these, at least 446 (7.5%) will need residential services.

Providing treatment to 5,942 people would cost a staggering $47,392,000 annually. Of course, there are not enough public funds

available to meet the entire need, and many of the people needing treatment at any given time are not ready or willing to get help.

Therefore, the recommendations set forth are based on meeting 25% of the identified need to treat opioid addiction in Hamilton County. This is a modest target, but one that will save lives in the short term and hopefully reverse the epidemic's trajectory over time.

Goal: ***More Hamilton County residents achieve long-term recovery as a result of addiction treatment, related services, and sober support groups.***

Specifically we hope to have:

- ***more county residents achieve long-term recovery***
- ***fewer residents overdose on opioids***

STRATEGY #1: ***Increase the capacity of all levels of addiction treatment care, particularly for indigent and underinsured Hamilton County residents.***
Meeting 25% of the identified need to treat opioid addiction in Hamilton County will require increasing the capacity of all levels of care. At minimum, increasing capacity will require this annual investment:

This is the estimated annual cost of increasing Hamilton County treatment providers' capacities to serve an additional 111 residential clients per year and an additional 1,374 intensive outpatient and traditional outpatient client per year. This does *not* include the cost of existing residential and outpatient services in Hamilton County.

These recommendations are consistent with the most recent plan issued by the Hamilton County Mental Health and Recovery Services Board.[63] The Board identified these challenges detracting from achieving this plan:

- Timely access to addiction treatment is a challenge due to insufficient resources (in terms of funding and credentialed providers) to meet the need in Hamilton County.
- Detoxification is available on a limited basis for indigent clients, which leads to delays. Many of those seeking help refuse it once a bed becomes available, if too much time has passed between inquiry and availability.
- Specialized programs for pregnant women and women with children are available, but have limited capacity

Level of Care	Average Cost Per Client	Total Estimated Cost
Residential services x 111 clients (Residential detoxification, residential treatment, recovery housing)	$20,000/yr.	$2,220,000/yr.
Outpatient treatment x 1,374 clients Intensive outpatient, traditional outpatient	$7,000/yr.	$9,618,000/yr.
TOTAL		**$11,838,000/yr.**

STRATEGY #2: ***Enhance addiction treatment services through the continued use of evidence-based counseling practices and by making Medication Assisted Treatment (MAT) more available in conjunction with treatment services.***

Medication Assisted Treatment uses approved medications such as Suboxone and Methadone to treat substance use disorders.

Medication Assisted Treatment (MAT) is the use of approved medications such as Suboxone and Methadone to help treat substance use disorders. Research shows that opioid addiction is a medical disorder that can be effectively treated when MAT is administered in conjunction with counseling.[64] The Hamilton County ROE Workgroup supports the use of MAT under the following conditions:

- When MAT is used in conjunction with some form of counseling. The ROE Workgroup does not support the use of MAT as the sole intervention for opioid addiction.
- When a client has undergone a comprehensive assessment that indicates MAT is appropriate for that particular client. Not all clients addicted to opioids are appropriate for MAT.

The benefits of MAT include increased patient retention in treatment, decreased drug use, and decreased transmission of infectious diseases. MAT is also cost effective. Every dollar invested in methadone treatment generates an estimated return of $3 to $4.[65] Consistent with the most recent plan issued by the Hamilton County Mental Health and Recovery Services Board,[66] the ROE Workgroup has identified making MAT available to indigent and/or underinsured county residents as a priority. Indeed, MAT is expensive even if insurance covers some of the costs.

According the Substance Abuse and Mental Health Services Administration (SAMHSA), there are 77 physicians with Cincinnati or Harrison addresses who have a waiver to prescribe Suboxone.[67] However, some of the doctors listed are not providing MAT at this time, or they may only see patients of a particular treatment program. Plus, doctors with a waiver may treat only 30 patients in Year 1 and 100 patients annually in subsequent years.

However, a U.S. Senate bill co-sponsored by Senator Sherrod Brown (D-OH) proposes to increase the number of Year 1 patients from 30 to 100. Doctors with additional training could see even more patients in later years. Nurses who complete required training would also be able to write prescriptions.

STRATEGY #3: ***Increase the number of recovery housing units available for Hamilton County residents.***

Recovery housing facilities offer alcohol and drug free living arrangements for people in recovery from addiction. This housing can be in the form of a group home or individually leased apartments at one or more sites. In many cases, recovery housing serves as a permanent home if the person lacks family support or would otherwise have to live in a neighborhood not conducive to recovery. The ROE Workgroup has identified the following as a high priority:

- Increasing the availability of recovery housing for people on Medication Assisted Treatment (MAT); and
- Increasing the availability of recovery housing for women.

STRATEGY #4: ***Increase peer support for people in recovery and for providers of Medication Assisted Treatment.***

Treatment providers have a long history of collaborating with 12-Step fellowships such as Alcoholics Anonymous and Narcotics Anonymous to get their clients the long-term support they need to remain sober. Clients needing an alternative form of sober support now have options such as SMART Recovery® available in Hamilton County. Mutual help groups and peer support networks have played a vital role in helping many people remain sober and must remain available and easily accessible to all who need them.

In addition, the ROE Workgroup recommends exploring the feasibility of establishing peer support networks for physicians who provide Medication Assisted Treatment. Such networks will reduce the professional isolation that physicians may feel while providing a forum for the sharing of ideas and expertise.

From "Mrs A"

I started in the Crossroads Center Outpatient Suboxone Program in 2013. This program saved my life. I was taught how to maintain and focus on my sobriety through my involvement in the relapse prevention group therapy and individual counseling. I have been successful in maintaining clean urine drug screens since beginning the treatment program.

In the beginning, it was a challenge because my husband was still using. He would bring it into the house and have it around me. ...I am now stronger than ever and I feel empowered. With the help of my awesome therapist, I am free from the hold heroin had on me. I always say "MY GOAL" is much larger than my addiction.

REDUCING HARM CAUSED BY THE OPIOID EPIDEMIC

Harm Reduction Outcomes:

- Decrease the number of new Hepatitis C, HIV, and other infections caused by intravenous drug use
- Decrease the number of unintentional overdoses due to opioid use
- Decrease the transmission of Hepatitis C, HIV, and other infections through accidental needle sticks.

HARM REDUCTION STRATEGIES

- Increase community based Naloxone distribution
- Expand syringe exchange programs in Hamilton County
- Increase community support and education efforts
- Increase access to healthcare for intravenous drug users
- Provide overdose education and prevention services throughout Hamilton County.

REDUCING HARM CAUSED BY THE OPIOID EPIDEMIC

"Harm reduction" refers to a set of practices and strategies designed to reduce the negative consequences associated with drug use. One of the main goals of harm reduction is to keep people alive long enough to eventually benefit from addiction treatment or medical care. Harm reduction practices and strategies are guided by the following principles and beliefs:

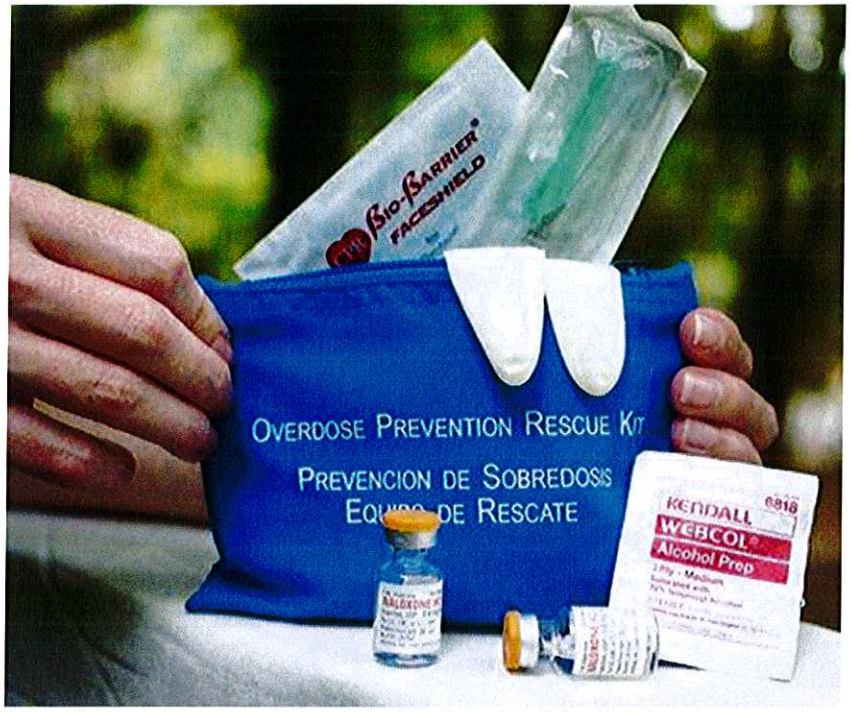
- Harm reduction strategies strive to minimize the harmful effects of licit and illicit drug use rather than ignoring or condemning them.
- Harm reduction acknowledges that some ways of using drugs are safer than others.
- Providing services and resources in a non-judgmental, non-coercive manner benefits people who use drugs and the communities in which they live.
- The realities of poverty, class, racism, social isolation, past trauma, sex-based discrimination and other social inequalities affect both people's vulnerability to and capacity for effectively dealing with drug-related harm.
- While striving to minimize the harmful physical effects of drugs, harm reduction strategies are not meant to trivialize or deny the tragic harm that licit and illicit drug brings to those who use drugs and to those who love them.
- Significant harm is done to others as a byproduct of addiction. Harm reduction protects others in the community from some of these consequences of addiction in our midst.

Response to Opioid Epidemic Facebook page

These used syringes were found in Fairview Park in Cincinnati.

Goal: ***To reduce the harmful effects of intravenous drug use and to decrease the public health risk to the community. Specifically, we hope to:***

1. ***Decrease the transmission of hepatitis C, HIV and other infections through accidental needle sticks;***
2. ***Decrease the number of new hepatitis C, HIV and other infections caused by intravenous drug use; and***
3. ***Decrease the number of unintentional overdoses due to opiate use.***



Harm Reduction Coalition/ Nabarun Dasgupta

Wider distribtion of naloxone kits such as this one would help reverse more opioid overdoses.

In order to decrease opiate related deaths in Hamilton County by 20% and to decrease the rate of new hepatitis C infections by 25%, the following strategies must be sustained or implemented by 2016.

STRATEGY #1: ***Community based naloxone distribution.*** Naloxone is a prescription medication that can reverse opioid overdoses. It can be injected into the victim or sprayed into the nose. For many years, it was administered only by emergency medical personnel, but is now more available to police officers, to the loved ones of those addicted to opioids, and to opioid addicts themselves. There is no evidence that administering naloxone enables or encourages anyone to continue misusing opioids. The ROE Workgroup proposes the following steps to increase the availability of naloxone in Hamilton County:

Distribution

- Increase availability of naloxone to community at large by expanding existing programs and establishing new ones. By 2016, add an additional 10 distribution sites in Hamilton County at a cost of $125,000.
- Supply naloxone to all first responders and Downtown Cincinnati Inc. workers and provide training to them. Make naloxone available on all Hamilton County ambulances by 2016.
- Provide naloxone to all Justice Center medical staff
- Make at least one naloxone kit available in each pod at the Justice Center

Advocacy

- Lobby to get laws changed so that naloxone can be dispensed over the counter by 2016.

Education

- Train and supply naloxone to 50 organizations by 2016 who serve those with a high overdose potential.
- Establish a stronger relationship with the Court Clinic to provide overdose education and naloxone to staff and clients
- Provide overdose education and prevention services to all Justice Center staff and inmates.

The total expected cost of naloxone distribution for one year

Cincinnati Exchange Project

Staff members of the Cincinnati Exchange Project van provide participants with a clean syringe for every "dirty" one. They also educate about safer sex, safer injection use and where to get drug treatment.

is $175,000. Some of the cost will be covered by insurance.

STRATEGY #2: ***Syringe Exchange.*** Although controversial, syringe exchange is an effective harm reduction strategy supported by the Centers for Disease Control.[68] Injection drug use accounts for approximately 20% of all HIV infections and the majority of hepatitis C cases.[69] Accordingly, Scioto County in southern Ohio has experienced a drop in hepatitis C attributed partly to syringe exchange and education for people who use injection drugs.[70]

In Hamilton County, the Cincinnati Exchange Project (CEP) began operations in early 2014. The CEP is an advocacy organization that promotes education and the harm reduction model. The program allows IV drug users to exchange used needles for clean ones, since hepatitis C can remain infectious on inanimate surfaces for up to 9 weeks. Participants receive information about addiction treatment, health care services, and other topics. Pregnancy testing and rapid HIV and hepatitis C testing are available.

The CEP can serve up to 500 people annually with a budget of $74,000 once the program is in continuous operation. In contrast, the estimated lifetime cost of treating a single HIV infected person is $379,668.[71] As of 9/30/14, the CEP had served 106 people. Of these, 9 have gone on to addiction treatment, 8 have been revived with naloxone kits distributed by CEP, and 2 died.

The CEP has also trained police in Cincinnati's central business district to use naloxone.

The ROE Workgroup recommends taking the following steps related to syringe exchange:

Exchange

- Expand the Cincinnati Exchange Program (CEP) locations to five in Hamilton County (within city and outside of city) by 2016.
  - Offer syringe exchange services 5 days a week by 2016.
  - Increase the CEP by 50% by 2015 and an additional 50% in 2016.
  - Test 75% of CEP clients for HIV and hepatitis C infections.
  - Expand access to the CEP through local hospital emergency departments.
  - Expand CEPs memorandum of understanding list to include more partner organizations
- Establish relationships with healthcare providers to make hepatitis A & B vaccines more readily available
- Continue to strengthen relationships with Cincinnati City Council, community councils, and Hamilton County commissioners to increase support for the CEP
- Increase the number of HIV and hepatitis C tests conducted with this population by 50% (cost = $7,500)

The estimated cost to carry out all harm reduction activities is $256,500 for one year.

Advocacy

- Continue to advocate for syringe exchange and harm reduction at the local level with village, city, and county reps.
- Advocate for the passage of the syringe exchange bill in the Ohio legislature. Attend lobby days such as the HIV/AIDS, drug treatment providers, and social services days.
- Continue to partner with treatment facilities to reduce the barriers to access treatment
- Expand relationship with the Off the Streets program. Off the Streets helps women escape from prostitution

Education

- Provide information about addiction treatment and other services to 100% of CEP clients.
- Engage local communities in education/prevention efforts through forums and educational sessions. Provide 20 educational forums by 2016.
- Provide education on safer sex/injection practices to 80% of CEP participants.

STRATEGY #3: ***Community support and education.*** Naloxone distribution and syringe exchange programs must be supplemented by organized efforts to collect and discard dirty needles plus other activities to increase the effectiveness of a harm reduction

approach. At the time of this writing, the CEP had collected 70 discarded needles.

The ROE Workgroup recommends the following activities:

- Spend 20 hours per month spent cleaning up syringes and other intravenous drug use equipment in targeted high risk neighborhoods
- Have representatives from the Hamilton County ROE group and the CEP attend 20 community clean ups in 2014/15 to track how many syringes are found.
- Help the intravenous drug user population access health care and treatment through obtaining insurance for which they are eligible.

The total estimated cost of carrying out all the harm reduction activities for one year is $256,500.

Judith Feinberg, MD

Professor of Clinical Medicine, the University of Cincinnati

Medical Director, the Cincinnati Exchange Project

The whole purpose of the Cincinnati Exchange Project is to keep people alive and healthy until they're ready for recovery and treatment. Sooner or later, people do come in and say, "I've had it, help me." My hope is that the plan put forth by the Hamilton County ROE Workgroup allows the Cincinnati Exchange Project to save more lives while decreasing the rate of Hepatitis C and HIV in Hamilton County.

PREVENTING OPIOID MISUSE

Prevention Outcomes:

- Fewer people begin misusing prescription opiates
- Fewer people begin using heroin and other illegal opioids

PREVENTION STRATEGIES

- Provide information by educating the public and professionals about heroin and prescription drug issues.
- Build skills, connected to trust and communication
- Improve the safety of the physical environment
- Advocate for policies that increase the availability of permanent drop boxes and education about SBIRT and pain management practices.

PREVENTING OPIOID MISUSE

Research shows that $1 spent on school-based substance use prevention programs can potentially save an estimated $18 in costs stemming from substance use.[72] Preventing drug use from occurring in the first place is the most cost effective method for promoting safer and healthier communities. For prevention efforts to have an effect, they must be comprehensive, offer a coordinated message to target audiences, and provided on a large enough scale to make a difference among Hamilton County residents of all ages.

School-based prevention programs have been, and will continue to be an important part of prevention efforts in Hamilton County. However, reversing the epidemic requires prevention and outreach activities affecting county residents of all ages.

Effective prevention efforts are comprehensive, address all forms of drug misuse or abuse, and address both individual and environmental influences associated with drug abuse. We can create and promote a culture conducive to Hamilton County residents making healthier choices of all kinds. Fortunately, there are already several existing prevention programs in Hamilton County doing this work here.

To guide the future work of the ROE Workgroup and prevention programs in Hamilton County, we offer the following plan, based on the Seven Strategies of Community Change from the Community Anti-Drug Coalitions of America[73]:

Goal: ***To build the capacity of Hamilton County to identify, develop, and implement strategies that promote healthy behaviors.***

1. To increase education in the community on the harmful effects of opioid abuse.
2. To increase community awareness of the risk of addiction and other pain management resources.
3. To connect the community to available resources in the community.
4. To increase implementation of effective evidence-based practices and programs.
5. To reach children of current users and abusers.

Effective prevention efforts are comprehensive and address all forms of drug misuse or abuse and individual and environmental influences.

STRATEGY #1: ***Provide information to the public and professionals about heroin and prescription drug issues.*** Too many people misuse their own prescription drugs or others' prescription medications. Up to 50% of medications are not taken as prescribed.[74] Furthermore, this is often not perceived as

The Coalition for a Drug-Free Greater Cincinnati

The Coalition for a Drug-Free Greater Cincinnati holds a youth summit to foster the prevention of drug misuse among teenagers.

a problem in the first place. According to the Coalition for a Drug Free Cincinnati, almost 18% of students in grades 7-12 said that using someone else's prescription drugs was not harmful or only somewhat harmful.[75] The Mayo Clinic identifies a lack of knowledge about prescription drugs as a risk factor for prescription drug abuse.[76] The ROE Workgroup recommends the following activities related to this strategy:

- Inform the public about prescription drug misuse and heroin issues through social media, public service announcements, community forums, website, and print materials.
- Provide information to improve patient compliance with use of prescription drugs and improve awareness of the risk of addiction to opiates
- Disseminate available drop box, Rx Take Back Days, and Mobile Van information.
- Write OpEds related to prescription drug abuse
- Disseminate information to parents via pharmacists on proper ways to store and dispose prescription drugs
- Partner with organizations to educate women of childbearing age, particularly those who are pregnant, about the dangers of

prescription drug misuse and heroin abuse.

STRATEGY #2: ***Build skills.*** Providing information is necessary, but not sufficient by itself. To reduce the incidence of opioid misuse in Hamilton County, providers of prevention services must build the skills of professionals, parents, youth, and others in the community. Here, areas of focus will include Developmental Assets[77], Screening, Brief Intervention, and Referral to Treatment (SBIRT), and alternative pain management practices.

In 1990, the Search Institute identified 40 Developmental Assets that adolescents need to succeed in life. These include external assets, such as family support and a caring school climate, and internal assets such as interpersonal competence and skills to resist negative peer pressure. The ROE Workgroup encourages services and activities that promote the development of these assets in Hamilton County youth.

SBIRT is an evidence-based approach to intervening at an earlier stage with people who are misusing substances or who are at risk for doing so. SBIRT can be offered in nearly any setting, but is typically seen in emergency rooms and primary care settings. It is designed to assist patients whose presenting issue may be something other than substance use or misuse. SBIRT is a prevention-based service because it reduces the odds that someone will go on to develop a diagnosable substance use disorder.

Alternative pain management practices can include non-traditional interventions such as biofeedback, chiropractic services, and acupuncture. Many such practices were widely disregarded by mainstream medical practitioners in the past, but are now commonly used at pain centers.[78]

The ROE Workgroup recommends the following activities:

- Increase the number of educational opportunities to heighten family members' and community members understanding of addiction and help resources.
- Collaborate with medical practitioners to improve awareness of the risk of addiction and other pain management resources.
- Work with service providers to implement Developmental Assets and other related evidence-based programs and practices.
- Promote the use of the SBIRT evidence-based approach to assist patients in healthcare settings.
- Partner with the Academy of Medicine to provide medical professionals with educational opportunities about the use of alternative pain management practices, the best opiate prescribing practices, and the disease of addiction.

- Develop and/or support youth-led prevention efforts.
- Provide educational opportunities for youth and families around opioid and other drug prevention.

STRATEGY #3: ***Improve the safety of the physical environment.*** Individual prevention activities often focus on changing people's behavior. However, prevention services can and should be offered in tandem with efforts to change our immediate physical environment, since our environment affects us all individually. To this end, the ROE Workgroup recommends:

- Participating in Community Beautification Campaign to clean up needles and other drug paraphernalia.
- Partnering with community councils, churches, and/or coalitions to address lighting and other risk factors that lead to risky behaviors of the community.

STRATEGY #4: ***Modify policies and broader systems.*** Policy and system changes are frequently more effective in creating long-term impact. Prevention efforts that support healthy community norms and readiness to implement prevention activites are essential to a comprehensive prevention plan. The ROE Workgroup recommends:

- Advocating for permanent drop boxes in locations other than law enforcement facilities.
- Working with medical boards to require SBIRT and pain management practices education.

Estimated Cost of carrying out the prevention plan: $350,000 in 2015

Mary Haag, RN, BSN, OCPSII, ICPS

President/ CEO/Executive Director, Coalition for a Drug Free Greater Cincinnati

If we're going to get ahead of the epidemic, we need to put more emphasis on prevention. One of the biggest risk factors for addiction is early onset of use. To interrupt that, we need to offer prevention early and frequently. This is critical because of the effect drugs have on the young person's developing brain. My hope is this plan will get a wider variety of people involved in solving this problem.

CUTTING THE SUPPLY OF OPIOIDS IN HAMILTON COUNTY

Supply Reduction Outcomes:

- Reduce the supply of heroin in Hamilton County
- Less diversion of prescription opiates

SUPPLY REDUCTION STRATEGIES

- Enforce current laws and regulations
- Collaborate with others to educate the public
- Explore the feasibility of implementing harm reduction measures on a larger scale

CUTTING THE SUPPLY OF OPIOIDS IN HAMILTON COUNTY

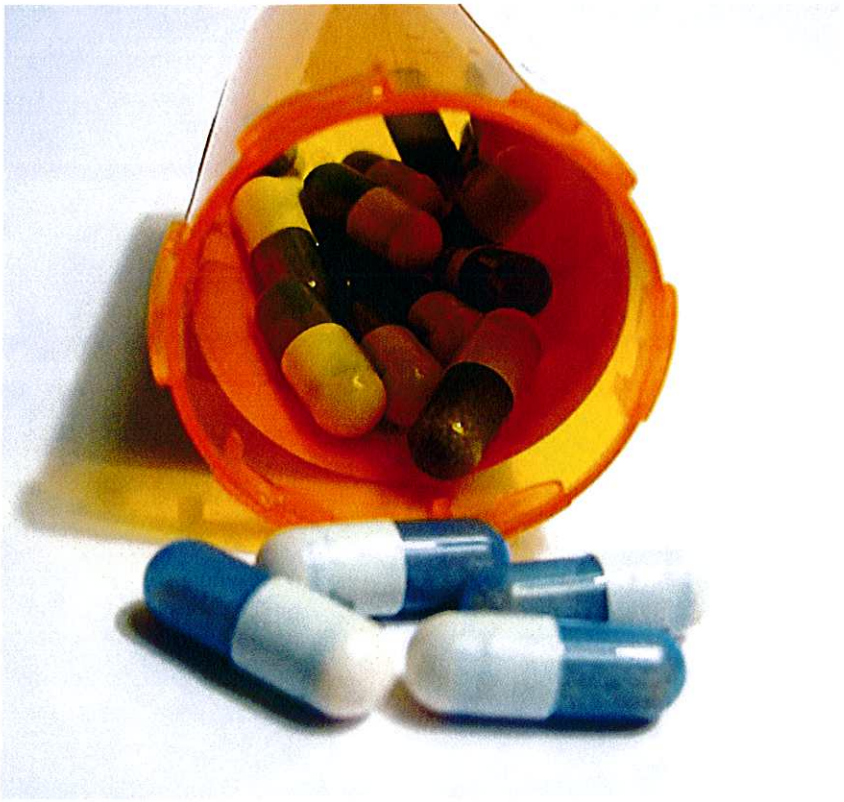
Goal: ***To reduce the supply of illegal prescriptions and illegal drugs with the following outcomes:***

- ***Reduced availability of heroin in Hamilton County; and***
- ***Less diversion of prescription opiates.***

Promoting unused prescription drug "take-back days" and drop-box locations in Hamilton County can help reduce the supply of opioids.

STRATEGY #1: ***Enforce current laws and regulations***

Street level officers in Hamilton County have the most direct exposure to people's drug-related behavior as it occurs in real time, and they are often the first to experience and note the overall drug-related trends in the county as they unfold. Although some suburban neighborhoods or areas generate a disproportionate share of opiate-related calls or arrests, officers have seen firsthand that opiates know no boundaries in terms of income, race, gender, or religion.



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Activities to advance this strategy will include the following activities:

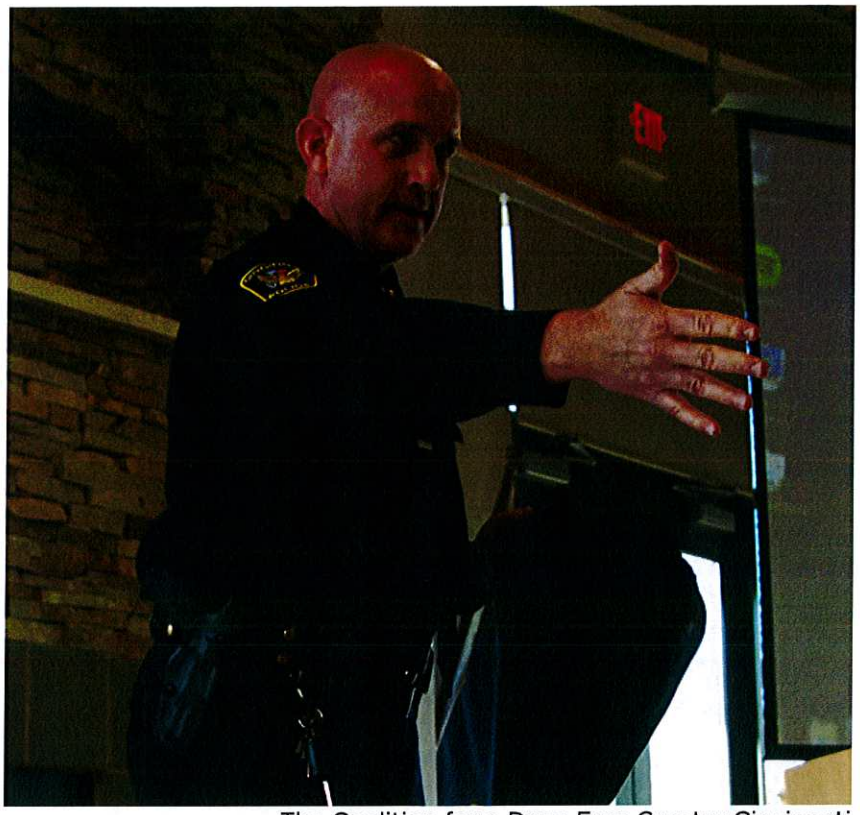
- Street-level officers will continue to enforce existing laws pertaining to heroin and prescription drug misuse at every opportunity.
- Work with the harm reduction, treatment, and prevention efforts to help get individuals who are ill, treated and individuals who are criminals, incarcerated.
- Apply for grants to sustain and/or expand supply reduction initiatives.
- Share information about drug related trends in Hamilton County as appropriate with the Hamilton County ROE Workgroup, law enforcement agencies, and the general public.

STRATEGY #2: ***Educate the public***

The opioid epidemic affects every county resident, whether or not they misuse opiates or have a loved one who does. In addition to the direct effects of opiates, the epidemic affects us

all in any number of ways – goods costing more due to shoplifting, increased health-related costs, and the fear and lack of trust that follows. Hamilton County's law enforcement agencies remain committed to educating the public about heroin and related issues. Activities related to this objective will include the following:

- Continue to collaborate with organizations and citizens through forums such as the Hamilton County ROE Workgroup.
- Partner with community organizations and churches to educate the general public and elected officials about heroin and its long-term public safety consequences.



The Coalition for a Drug-Free Greater Cincinnati

STRATEGY #3: ***Explore the feasibility of implementing harm reduction measures on a larger scale.***

Street level officers are often the first to come into contact with someone who has overdosed on heroin or other opiates. To this end, the Cincinnati Exchange Project (CEP) has recently trained police in Cincinnati's central business district to administer naloxone to people who have overdosed on opiates. Additional activities to advance this strategy include the following

- Explore the feasibility of equipping more police cruisers in Hamilton County with naloxone
- Equip more police cruisers with protective gloves and safe disposal receptacles to facilitate the collection of discarded needles found in public places.
- Collaborate with local media outlets and others to promote unused prescription "take-back days" and drop-box locations in Hamilton County.

Hamilton County's law enforcement agencies remain committed to educating the public about heroin and related issues.

WHAT YOU CAN DO NOW

This plan describes a lot of the consequences resulting from the opioid epidemic. But until this point, we have not addressed one of the biggest consequences of all...

Fear.

Fear such as the epidemic is too big to do much about it...or that one of our loved ones will become addicted...or that a loved one who is already addicted will not live long enough to get help. And so on.

Fear is a useful emotion that alerts us to possible danger. This epidemic is fraught with danger. But fear becomes the danger itself when it results in a failure to take action.

By writing this plan, the ROE Workgroup has provided a framework through which Workgroup participants can take immediate action, or to continue actions already underway.

But to reverse the course of the epidemic, we need the help of every Hamilton County resident. Here are four of many actions you can take now:

- ***Talk to your children*** about the dangers of illegal drugs, and about the dangers of drugs in your medicine cabinet. Chances are they know more than you think they do. But they need to hear it from you anyway.
- ***Join.*** The Hamilton County ROE Workgroup is open to all county residents. Email us at roe@interactforhealth.org to find out more. Or, you can join another coalition that is combating the epidemic in some way. Email the Coalition for a Drug Free Greater Cincinnati at info@drugfreecincinnati.org to find out if your neighborhood already has a coalition.
- ***Support.*** Most of the providers of harm reduction, prevention, and treatment services are 501(c)3 nonprofits that depend on financial donations and volunteer support to carry out their missions. Check out one of these organizations today.
- ***Provide*** support for those in recovery from addictive disorders and believe there is hope for change.

Thank you for your interest in helping us combat this public health epidemic.

ENDNOTES

[1] Hamilton County Public Health

[2] Hamilton County Coroner's Office, 2013 Annual Report

[3] Data adapted by OhioMHAS from the Ohio Hospital Association. Map produced March 2014. http://mha.ohio.gov/Portals/0/assets/Research/Maps/Ohio_ER_Dischcarges_2008_to_2012_v1.pdf

[4] Smith CB. "Needle exchange marches on after getting the boot." *Cincinnati Enquirer,* 4/5/14.

[5] Pennebaker H, Law J. (2014, May 12). "Heroin to kill hundreds of Hamilton County residents in 2014, nearly 1,000 statewide." Retrieved from http://www.wcpo.com/news/local-news/heroin-the-cause-of-death-for-hundreds-of-people-in-hamilton-county-in-recent-years

[6] Taylor K. "Tri-state hospitals drug testing mothers prior to delivery." http://www.fox19.com/story/23344359/cincinnati-area-sees-increase-in-babies-born-addicted-to-drugs

[7] Singh M. "Today's heroin addict is young, white and suburban." http://www.npr.org/blogs/health/2014/05/28/316673753/todays-heroin-addict-is-young-white-and-suburban

[8] "Shoveling Up II: The Impact of Substance Abuse on Federal, State, and Local Budgets." National Center on Addiction and Substance Abuse at Columbia University, May 2009.

[9] http://www.cdc.gov/hiv/prevention/ongoing/costeffectiveness/

[10] Marmor and Miller, 2013. A public health and healthcare spending time bomb: Hepatitis C. *Forbes Magazine*, as retrieved from http://www.forbes.com/sites/henrymiller/2013/06/19/a-public-health-and-healthcare-spending-time-bomb-hepatitis-c

[11] The C. Everett Koop Institute, Dartmouth Medical School. http://www.epidemic.org/thefacts/theepidemic/USHealthCareCosts/

[12] Pollack A. "Harvoni, a Hepatitis C drug from Gilead, wins F.D.A. approval." *New York Times,* 10/10/14. http://www.nytimes.com/2014/10/11/business/harvoni-a-hepatitis-c-drug-from-gilead-wins-fda-approval.html?_r=1

[13] Ohio Substance Abuse Monitoring Network. "Drug Abuse Trends in the Cincinnati Region," OSAM Drug Trend Report June 2013 – January 2014.

[14] Institute for Research, Education, and Training in Addictions. *Addictions Treatment: When Knowing the Facts Can Help.* http://files.ireta.org/today/05.pdf

[15] Heroin. (n.d.). In The Partnership at DrugFree.org. Retrieved from http://www.drugfree.org/drug-guide/heroin.

[16] Wood G. 2014. Drug dealers aren't to blame for the heroin boom. Doctors are. *New Republic,* 3/19/14. http://www.newrepublic.com/article/116922/what-makes-heroin-crisis-different-doctor-prescribed-pills

[17] Muhuri PK, Gfroerer M, Davies C. "Associations of nonmedical pain reliever use and initiation of heroin use in the United States." *SAMHSA CBHSQ Data Review,* August 2013.

[18] Wood G. 2014. Drug dealers aren't to blame for the heroin boom. Doctors are. *New Republic,* 3/19/14. http://www.newrepublic.com/article/116922/what-makes-heroin-crisis-different-doctor-prescribed-pills

[19] Interview with Barry Meier, author of *A World of Hurt: Fixing Pain Medicine's Biggest Mistake*, Join Together, September, 213. As retrieved from: http://www.drugfree.org/join-together/addiction/problems-with-long-term-opioid-use-how-we-got-here?utm_source=Join%20Together%20Daily&utm_campaign=8fe7682375-JT_Daily_News_Problems_With_Long_2013&utm_medium=email&utm_term=0_97f4d27738-8fe7682375-221298449.

[20] Pilcher J, Bernard-Kuhn L. "Across the US, an explosion of addiction. *Cincinnati Enquirer,* 6/15/14.

[21] https://prod.ada.ohio.gov/SEOWPublic/FileList.aspx?County=hamilton

[22] https://prod.ada.ohio.gov/ControlledReports/?ReportFolder=SeowReports&ReportName=ParameterLine&Id=1172&Parameter=hamilton

[23] Data adapted by OhioMHAS from the Ohio Hospital Association. Map produced March 2014. http://mha.ohio.gov/Portals/0/assets/Research/Maps/Ohio_ER_Dischcarges_2008_to_2012_v1.pdf

[24] http://www.healthy.ohio.gov/vipp/drug/dpoison.aspx

[25] Poturalski H. "Drug overdose rate among women skyrockets. *Dayton Daily News*, posted 8/4/14.

[26] https://prod.ada.ohio.gov/ControlledReports/?ReportFolder=SeowReports&ReportName=ParameterLine&Id=1328&Parameter=hamilton

[27] http://www.drugabuse.gov/publications/research-reports/heroin/why-are-heroin-users-special-risk-contracting-hivaids-hepatitis-b-c

[28] Hamilton County Public Health

[29] Marmor and Miller, 2013. A public health and healthcare spending time bomb: Hepatitis C. *Forbes Magazine*, as retrieved from http://www.forbes.com/sites/henrymiller/2013/06/19/a-public-health-and-healthcare-spending-time-bomb-hepatitis-c

[30] The C. Everett Koop Institute, Dartmouth Medical School. http://www.epidemic.org/thefacts/theepidemic/USHealthCareCosts/

[31] Pollack A. "Harvoni, a Hepatitis C drug from Gilead, wins F.D.A. approval." *New York Times,* 10/10/14. http://www.nytimes.com/2014/10/11/business/harvoni-a-hepatitis-c-drug-from-gilead-wins-fda-approval.html?_r=1

[32] Su J, Brook RA, Kleinman NL, Corey-Lisle P. 2010. The impact of hepatitis C virus infection on work absence, productivity, and healthcare benefit costs. *Hepatology,* 52(2): 436-42.

[33] Ibid

[34] Minutes from the Cincinnati Board of Health meeting, 2/28/12 http://www.cincinnati-oh.gov/health/linkservid/497C7414-A6A5-0A78-AB65606EA3C1678C/showMeta/0/

[35] Haverkos HW, Lange WR. (1990) Serious infections other than human immunodeficiency virus among intravenous drug abusers. *Journal of Infectious Diseases,* 161: 894-902. Miro JM, del Rio A, Mestres CA (2001. Infective endocarditis in intravenous drug abusers and HIV-1 infected patients. *Infectious Disease Clinics of North America,* 16: 273-295.

[36] Law J. "'I'm pregnant and I'm a heroin addict.' Cincinnati mother describes struggle to get clean." http://www.wcpo.com/news/local-news/i-team/im-pregnant-and-im-a-heroin-addict

[37] Taylor K. "Tri-state hospitals drug testing mothers prior to delivery." http://www.fox19.com/story/23344359/cincinnati-area-sees-increase-in-babies-born-addicted-to-drugs

[38] Perinatal News & Events (newsletter of the Cincinnati Children's Perinatal Outreach Program). July 2014, Vol VIII, Issue 4.

[39] Ungar L. "Kentucky sees surge in addicted infants." *The Louisville Courier-Journal,* updated 8/27/12, retrieved from http://usatoday30.usatoday.com/news/health/story/2012-08-26/kentucky-babies-addiction/57331390/1

[40] Ohio Department of Rehabilitation and Correction. http://www.drc.ohio.gov/web/Snapshots/

hamilton%202013.pdf

[41] Ibid

[42] Ibid

[43] Lorentz J, Hill L, Samimi B. (2000). Occupational needlestick injuries in a metropolitan police force. *American Journal of Preventive Medicine,* 18(2): 146-50

[44] Email correspondence with City of Blue Ash Fire Department

[45] "Heroin use soars in Ohio child custody cases," Associated Press, 5/14/14. http://www.wlwt.com/news/heroin-use-soars-in-ohio-child-custody-cases/25976910

[46] Ibid

[47] Letter to the editor from Gayle Channing Tenenbaum, Public Children Services Association of Ohio. "Bill brings some help for opiate addiction, but more is needed." *Columbus Dispatch,* 5/17/14. http://www.dispatch.com/content/stories/editorials/2014/05/17/bill-brings-some-help-for-opiate-addiction-but-more-is-needed.html

[48] Email correspondence with Hamilton County Jobs and Family Services

[49] Essex R. "Here's how to get Rx drugs off the streets." *Cincinnati Enquirer,* 3/12/14.

[50] Ibid

[51] http://www.cdc.gov/homeandrecreationalsafety/rxbrief/

[52] http://www.cdc.gov/vitalsigns/opioid-prescribing/

[53] Bischoff LA. "BWC works to curb opiate abuse: Controlled substance prescriptions for chronic care won't be covered unless provider participates in tracking system." *Norwalk Reflector,* 1/31/14. http://www.norwalkreflector.com/article/4084196

[54] Ibid

[55] Ibid

[56] Coalition for a Drug Free Greater Cincinnati. http://www.drugfreecincinnati.org/pages/coalitionstrategies/subcat/11/

[57] Coalition for a Drug Free Greater Cincinnati. http://www.drugfreecincinnati.org/pages/coalitionstrategies/subcat/11/

[58] http://www.uc.edu/wellness/topic_areas/drugs.html

[59] Institute for Research, Education, and Training in Addictions. *Addictions Treatment: When Knowing the Facts Can Help.* http://files.ireta.org/today/05.pdf

[60] National Institute on Drug Abuse (2012). *Principles of Drug Addiction Treatment: A Research-Based Guide (3rd edition).* NIH Publication No. 12-4180. http://www.drugabuse.gov/sites/default/files/podat_1.pdf

[61] National Center on Addiction and Substance Abuse at Columbia, 2009. *Shoveling Up ii: The Impact of Substance Abuse on Federal, State, and Local Budgets.*

[62] Substance Abuse and Mental Health Services Administration. *Behavioral Health Barometer: Ohio, 2013.* HHS Publication No. SMA-13-4796OH. Rockville, MD: Substance Abuse and Mental Health Services Administration, 2013.

[63] Community Plan submitted by the Hamilton County Mental Health and Recovery Services Board to the Ohio Department of Mental Health and Addiction Services. http://mha.ohio.gov/

Portals/0/assets/Planning/CommunityPlan/2014/Hamilton%202014%20Community%20Plan.pdf

[64] Center for Substance Abuse Treatment. *Medication-Assisted Treatment for Opioid Addiction in Opioid Treatment Programs.* Treatment Improvement Protocol (TIP) Series 43. HHS Publication No. (SMA) 12-4214. Rockville, MD: Substance Abuse and Mental Health Services Administration, 2005.

[65] National Institute on Drug Abuse, Medication-Assisted treatment for Opioid Addiction, revised April 2012 as retrieved from: http://www.drugabuse.gov/publications/topics-in-brief/medication-assisted-treatment-opioid-addiction

[66] Community Plan submitted by the Hamilton County Mental Health and Recovery Services Board to the Ohio Department of Mental Health and Addiction Services. http://mha.ohio.gov/Portals/0/assets/Planning/CommunityPlan/2014/Hamilton%202014%20Community%20Plan.pdf

[67] http://buprenorphine.samhsa.gov/bwns_locator/

[68] http://www.cdc.gov/idu/facts/aed_idu_syr.pdf

[69] Ibid

[70] Allen W. "County Hepatitis C rates down in 2012." *Portsmouth Daily Times*, 7/30/14. http://portsmouth-dailytimes.com/news/home_top-news/50117569/County-Hepatitis-C-rates-down-in-2012#.U_28-dm9LCQ

[71] http://www.cdc.gov/hiv/prevention/ongoing/costeffectiveness/

[72] Miller T, Hendrie D. *Substance Abuse Prevention Dollars and Cents: A Cost-Benefit Analysis*, DHHS Pub. No. (SMA) 07-4298. Rockville, MD: Center for Substance Abuse Prevention, Substance Abuse and Mental Health Services Administration, 2008.

[73] http://www.cadca.org/files/SevenStrategies4CommunityChange.pdf

[74] http://www.theatlantic.com/health/archive/2012/09/the-289-billion-cost-of-medication-noncompliance-and-what-to-do-about-it/262222/

[75] Coalition for a Drug Free Greater Cincinnati, 2012 CDFGC Online Community Survey

[76] http://www.mayoclinic.org/diseases-conditions/prescription-drug-abuse/basics/risk-factors/con-20032471

[77] http://www.search-institute.org/research/developmental-assets

[78] http://www.webmd.com/pain-management/chronic-pain-11/alternative-treatments

2014 Student Drug Use Survey

Alcohol and Drug Consumption by Youth in Greater Cincinnati

Results from the Coalition for a Drug-Free Greater Cincinnati 2014 Student Drug Use Survey

Special thanks to:

- Charles H. Dater Foundation
- Cincinnati Children's Hospital Medical Center
- City of Cincinnati Police Department
- Clinton County Family and Children First Council
- Hamilton County Mental Health Recovery Services Board
- Interact for Health
- Keith King, PhD, MCHES
- Local Coalitions
- Mercy Health Partners
- Ohio Department of Mental Health and Addiction Services
- Other organizations who facilitated the implementation of this survey
- PRIDE Surveys, Inc.
- School Participants
- Western & Southern Foundation

Topic summaries and regional key findings from 2000 to 2014 are available at www.DrugFreeCincinnati.org

Aggregate raw data in SPSS format is available on OASIS through www.OASIS.uc.edu

The Coalition for a Drug-Free Greater Cincinnati promotes drug-free environments for youth by enhancing partnerships to educate, advocate and support locally-based community mobilization.

The Student Drug Use Survey

The Student Drug Use Survey is a project of the Coalition for a Drug-Free Greater Cincinnati that provides in-depth analysis of the self-reported drug use patterns of area youth. Every two years, the Coalition implements the unprecedented Student Drug Use Survey to collect youth drug use data from seventh through twelfth graders throughout the 10 county Greater Cincinnati area. The survey is recognized across the region and nationally as a current and reliable source of validated information on local youth substance abuse and other health behaviors and is the largest of its kind in the country.

Measure	Alcohol	Cigarettes	Marijuana	Prescription *
Past 30-Day Use (%)	17.8	9.8	11.4	4.3
Perceived Harm/Risk (%)	69.3	90.6	67.6	88.3
Parental Disapproval (%)	85.7	93.9	92.8	96.1
Friend Disapproval (%)	57.4	75.0	69.9	86.2
Age of First Use (yrs.)	13.4	13.2	13.8	13.3

* Non-medical use

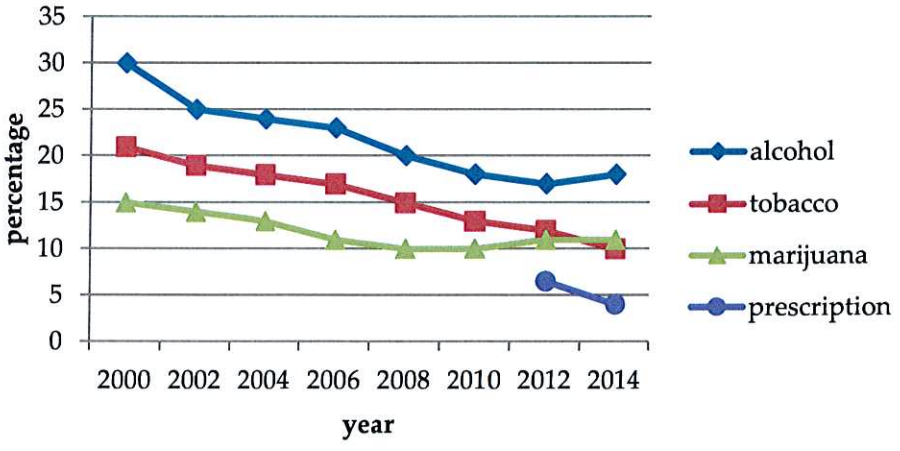
Demographics of Survey Respondents

The data is representative demographically of the region. It represents a census of the tri-state area's 7th-12th grade student population.

Methodology

A total of 56,708 seventh through twelfth grade students from 107 public and private schools in Brown, Butler, Clermont, Clinton, Hamilton and Warren counties in Ohio, and Campbell county in Kentucky completed the localized version of the PRIDE questionnaire between September 3, 2013 and December 16, 2013. No sampling was conducted. Every student in school on the day the survey was administered completed the survey. No surveys were conducted outside of the school building.

Past 30-Day Use



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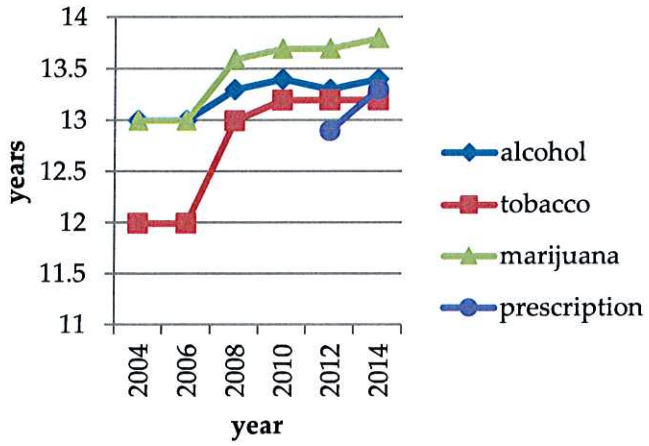
Phone: 513.751.8000 • www.DrugFreeCincinnati.org • Fax: 513.751.8001

Facts & Figures

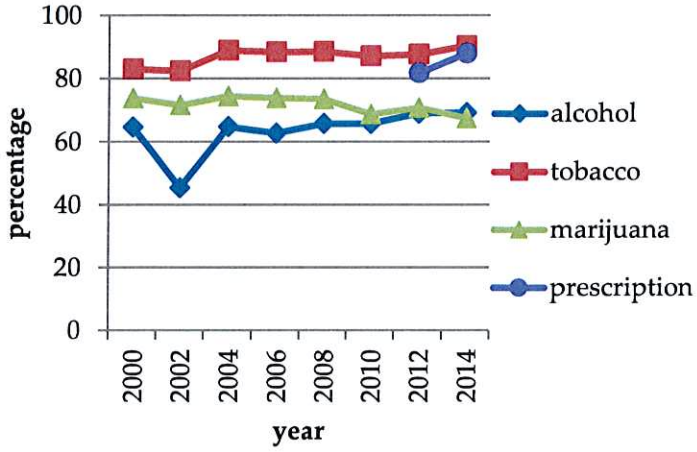
Age of First Use



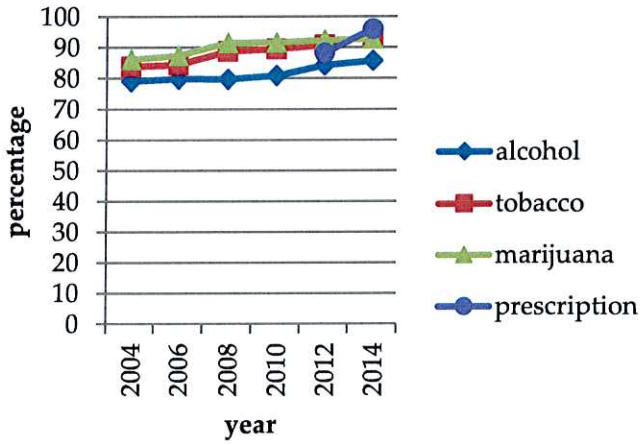
Conclusions

- Cigarette and prescription drug use is trending downward. Past 30-day use of alcohol and marijuana has increased slightly.
- Students report using tobacco earlier than prescription drugs, alcohol and marijuana.
- Tobacco and prescription drugs are perceived more harmful to health than alcohol and marijuana.
- Alcohol and tobacco are perceived to be easier to obtain than marijuana and prescription drugs.
- Parental Disapproval of adolescent substance use continues to improve.
- Friend Disapproval of peer substance use continues to improve.

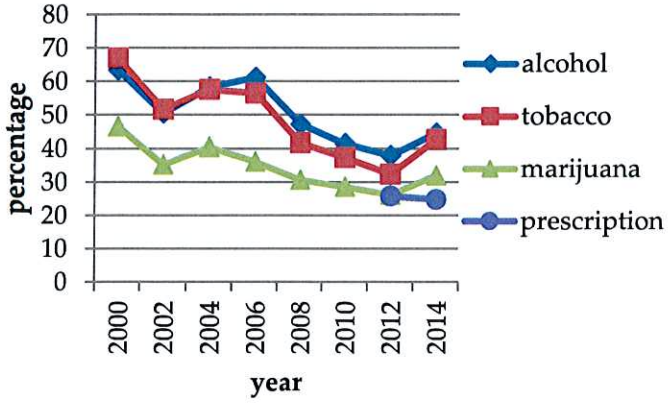
Perception of Harm/Risk



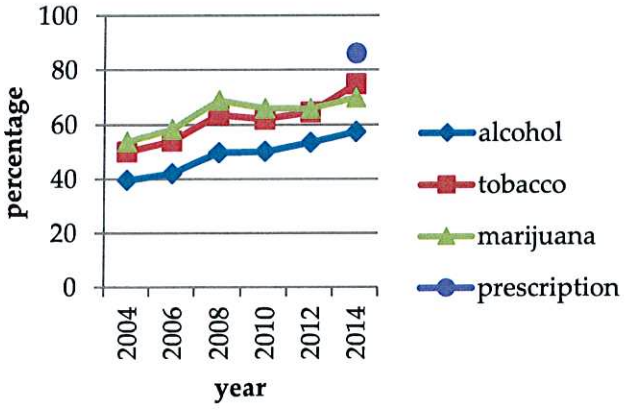
Parental Disapproval



Ease of Availability



Friend Disapproval



Talbert House

Building a Stronger Community...
One Life at a Time.

Teen Empowerment

Empowering Youth ✪ Making Positive Changes

Program Overview

Teen Empowerment is Evidence Based

Teen Empowerment is modeled after the **evidence based practice** out of Boston which has over 20 years of success. However, we are the first in the country to implement with middle school age youth.

Teen Empowerment is Asset-Based

Youth Organizers work to identify areas for improvement, **promote positive school climate**, help empower other students realize their own worth and **reduce underage drug & alcohol use**.

Teen Empowerment is Youth Led

Students apply to be **Youth Organizers**, go through an application & interview process. They are selected and work 4 days a week after school.

Description

Teen Empowerment gives young people a place and an opportunity to think about issues in Norwood and gives them the tools, inspiration, and ability to work with others in their school and community to start making important and positive changes. Students chosen to be Teen Empowerment Youth Organizers make a significant commitment of time, meeting after school four days a week. These Youth Organizers work together to identify community concerns, have their voices heard, and ultimately help collaboratively construct school and community events to target and raise awareness about the issues they identify. Youth Organizers are tasked with serving as leaders, role models, and example setters for fellow students at Norwood Middle School.

Statistics

During the 2014-15 school year, the Teen Empowerment program:

- Received over 90 applications from 7th & 8th grade students
- Employed 18 unique Norwood Middle School Youth Organizers
- Engaged in over 15 events and projects in their school and community
- Reached over 1,000 students and individuals via events & activities

The

TEEN EMPOWERMENT PROGRAM

at

NORWOOD MIDDLE SCHOOL

This year, the Youth Organizers have utilized a variety of asset building, prevention strategies and achieved the following successes:

First Semester (2015)

OCTOBER

Youth Summit @ Norwood High School

Education: Youth Leadership Activity & Community Based Process: Community Team Building

Open House

Information Dissemination/Education: Speaking Engagement, Parent/Peer/ Teacher Education

Breakout! Youth Summit @ UC

Education: Youth Leadership Activity & Community Based Process: Community Team Building & Alternative: College Visit

Hoodies

Information Dissemination: Social marketing messages & Environmental Campaigns

NOVEMBER

"Reasons for Saying No" Brochure

Information Dissemination: Newsletters, brochures, other publications

Concert Decorations

Alternative: Service Learning Activity

School Wide Thankfulness Project

Community-Based Process: Community Team Building

DECEMBER

Norwood Star Article

Information Dissemination: Press release and editorials & Environmental: Articles

Teen Empowerment Times Report

Information Dissemination: Newsletters, brochures, other publications

Shout Out Wall

Community-Based Process: Community Team Building

Awards Assembly Presentations

Education: Speaking Engagements & Community-Based Process: Community Team Building

Second Semester (2016)

JANUARY

Advertising/Recruitment/Interviews for Second Round YOs

Information Dissemination: Social marketing messages & Environmental: Campaigns

FEBRUARY

Candy Gram Campaign & Fundraiser

Environmental: Campaigns/Social Marketing Message & Alternative: Youth Leadership Activity

MARCH

Spring: "Be You, Be Unique" Campaign

Environmental: Campaigns/Social Marketing Message

APRIL

School Wide: "Be You, Be Unique" Talent Show

Alternative: Youth Leadership Activity & Community-Based Process: Community Team Building

MAY

How to Survive Middle School Presentations

Education: Speaking Engagements/ Classroom or Small Group Instruction & Alternative: Training/Workshop & Community-Based Process: Community Team Building

BE.YOU.TIFUL

The Youth Organizers utilized the primary asset building strategies of Information Dissemination, Education, Community–Based Process, Environment, and Alternatives* in their school and community to promote positivity and create structures for youth voice and change. This year's pre- and post- Developmental Assets Profile data shows an overall increase in **internal assets** among youth, as well as increases in the **asset building contexts** of: Personal, Social, and Community. In the **categories of assets**, increases can also be noted in areas of: Empowerment, Constructive Use of Time, Commitment to Learning, Positive Values, Social Competencies, and Positive Identity among youth reached by the program.

*Ohio Youth Led Prevention Network (OYLPN) Strategies

Child Welfare Opiate Engagement Project

The Ohio General Assembly has adopted more than a dozen bills in response to the opiate epidemic, aiming to promote improved prescribing practices and boost community-level treatment. But, to date, the legislature has yet to address the fallout to children of opiate abusers.

Nationally, between 60 percent and 80 percent of substantiated child abuse and neglect cases involve a parent or guardian abusing substances.[1, 2]

In Ohio, parents abusing heroin or opium-based painkillers such as Vicodin and OxyContin are a growing problem. Just the cost of placing their children in foster care is now conservatively estimated to be $45 million annually[3]—one of several costs on track to continue growing if no changes are made.

Among the nearly 86,000 cases entering Ohio's child welfare system annually, families dealing with opiate and/or cocaine abuse, including crack abuse, consume the most resources.[4]

- Half the children whose parents are not involved in cocaine and/or heroin leave foster care within four months. If the parents are using cocaine and/or heroin, half the children leave care within nine months.
- For parents, half the non-heroin, non-cocaine cases close within two months. Half the heroin and cocaine cases close within six months, with 18 percent remaining open two years or longer. Adding to the burden, heroin and cocaine cases reopen faster and more frequently.

Child welfare cases involving parents abusing heroin, cocaine or both have risen from about 15 percent to more than 25 percent of the caseload during the last five years, with heroin cases growing faster than cocaine during the last three years.[5]

Another troublesome trend: 70 percent of children age 1 or younger placed in Ohio's foster system are children of parents with substance use disorders involving opiates and cocaine.[6] Children raised in substance-abuse environments are vulnerable to the toxic stress common within families struggling with addiction. The toxic stress results in problems—some lasting a lifetime—that include depression, anxiety, PTSD and behavioral and learning difficulties, as well as significant attachment problems.[7 8 9]

This epidemic has one more issue calling for urgent action. Due to the negative impacts of temporary care on children, when a child welfare agency removes a child from a home, the agency must abide by time limits imposed by the 1998 Adoption and Safe Families Act. Reunification of parents and children is most often in the best interest of the children. But, dependency treatment can be a lengthy process, and parents who cannot recover within 15 to 22 months may permanently lose custody.[10] Currently, more than 25 percent of foster placements involving children of opiate- and/or cocaine-dependent parents last 15 or more months, pushing against the time limits.[11]

Best Practices

Opiate abuse and the associated problems and costs have increased in every segment of Ohio, from rural to suburban to urban and across the socioeconomic spectrum. Fortunately for Ohio and its public agencies, there are evidence-based best practices they can adopt or use more widely. The four practices described below coordinate services to increase the effectiveness of programs. They eliminate duplication. They yield better outcomes for children of parents with the disease of addiction and for the parents themselves—in shorter time. And, in the long run, they save taxpayer money.

Family Dependency Treatment Courts

Ohio has 16 Family Dependency Treatment Courts (FDTCs)[1] that focus on treatment and rehabilitation of parents whose children are in the child protection system. The courts address the parent's substance use disorder as the root cause of child neglect and abuse.

Family drug courts are among the most effective programs for inducing parents to enter and complete substance abuse treatment, improving other outcomes and saving public funds.[12] [13]

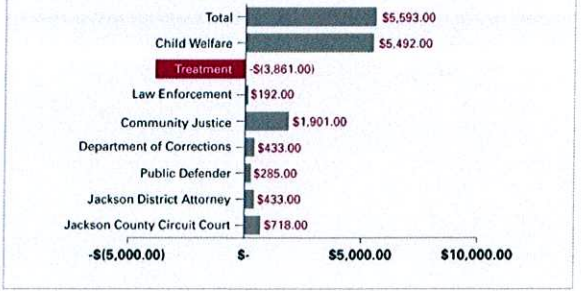
Compared to nearby traditional courts, independent impact evaluations[14] [15] [16] of 12 FDTCs from Maine to Arizona and in the United Kingdom showed:

- Participants completed addiction treatment at a higher rate in all but one court. In eight courts, the completion rate was between 21 and 37 percent higher.
- Children of parents with substance use disorders were released from foster care substantially sooner in all but one court. Eight courts saw significant reductions ranging from two to nearly 7 months.
- More families were reunified in 11 courts; 17 to 46 percent more in eight of the courts.
- Among the seven courts that reported terminations of parental rights, all saw a decrease, ranging from 2 to 27 percent.

By design, parents in family drug courts have greater participation in drug treatment programs compared to participants in traditional courts, resulting in higher treatment costs. Total costs for FDTC programs ranged from about $7,000 to nearly $14,000 per family.

But, the overall savings due to reduced use of foster care, the courts, jails and probation officers is substantial. The specialized courts saved taxpayers an average of $5,022 per family in Baltimore, $13,104 per family in Marion County, Oregon.[17] [18] [19]

Figure 1. **Average Cost Savings Per Participant Realized by each Agency in the Jackson County Community Family Court. Adapted with permission from Carey and colleagues. (2010a).**



SAVINGS BY AGENCY, JACKSON COUNTY, OR

[1] Belmont, Delaware, Clermont, Coshocton, Fairfield, Franklin, Hardin, Lorain, Lucas, Mahoning, Marion, Morrow, Ottawa, Summit, Trumbull and Union counties. Cuyahoga County is in the process of obtaining Supreme Court of Ohio certification.

The savings a family drug court provides a community may grow and accrue as participants maintain sobriety and other improvements over time and as more families with addiction problems participate in the program. Taxpayer savings increased ten-fold during the first five years the family drug court was in operation in Marion County, Oregon.

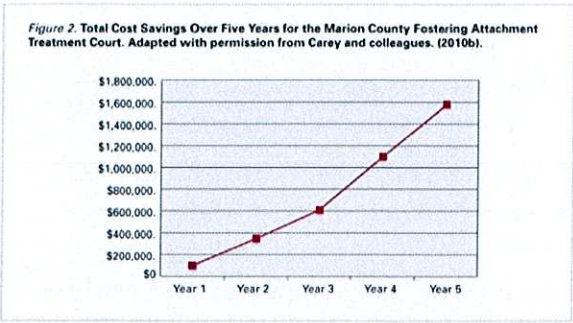


Figure 2. **Total Cost Savings Over Five Years for the Marion County Fostering Attachment Treatment Court. Adapted with permission from Carey and colleagues. (2010b).**

LONG-TERM SAVINGS, MARION COUNTY, OR

Evidence suggests that adult drug courts, which have been in use longer and are more widely studied, are more effective for participants whom traditional courts find most challenging. Studies show adult drug courts are equally effective regardless of which type of drugs are used by people with substance use disorders and despite the presence of other risk factors, such as mental illness and unemployment. Early studies are showing that family drug courts are having the same successes. [20]

Medication Assisted Treatment

Few people with opiate addiction recover permanently without Medication Assisted Treatment (MAT). In fact, opiate addiction treatment without MAT results in relapse rates of 80 to 95 percent, according to the federal Center for Substance Abuse Treatment. [21] [22] It is important to note that these medications are designed to be prescribed in conjunction with behavioral therapy, not as stand-alone treatment. [23] [24]

Patients who participate in behavioral therapy combined with the appropriate MAT have a long-term recovery rate of at least 50 percent, on par with chronic, relapsing diseases such as diabetes and hypertension.

MAT employs naltrexone, buprenorphine or methadone in combination with counseling and support services. NOTE: All medication must be safely stored out of the sight and reach of children and kept in childproof containers whenever possible.

The medications in conjunction with psychological and behavioral counseling are designed to:

- Improve chances of abstaining from opiate abuse
- Reduce cravings and preoccupation
- Retain patients in treatment and maintain the therapeutic relationship
- Decrease negative behaviors associated with addiction, including lying, neglect and law-breaking
- Reduce addiction-related consequences, including unemployment, homelessness and incarceration

Naltrexone, an opioid antagonist, is used in mild cases of opiate addiction. The drug blocks the effects of opiates, producing no high or pain relief. It has no abuse potential. A long-acting injectable form, called Vivitrol, was approved for treatment of opiate dependence in 2010. The older, oral from has been shown to decrease relapse rates in highly motivated and supervised patients by 80 percent.

Buprenorphine, also known as Suboxone, a partial opioid agonist, prevents withdrawal symptoms when an opiate abuser stops taking

painkillers or heroin quickly binding to opiate receptors and then slowly disassociating from them. The medication is typically used in cases of moderate dependence. Patients who take buprenorphine stay in treatment longer and have more opiate-free drug screens. There are two product lines of buprenorphine. The mono product (i.e., Subutex) contains only buprenorphine. The combo product (i.e., Suboxone, Zubsolv) contains buprenorphine and naloxone. The combo product was formulated to decrease the ability of patients to divert or abuse the medication.

Methadone, a full opioid agonist, is the oldest and best studied of the treatment medications and is used for severe cases of dependency. A Schedule II narcotic, methadone prevents withdrawal symptoms by binding to opiate receptors and suppressing opioid craving. The drug can only be dispensed in a certified Opiate Treatment Program. Methadone reduces cravings and is evidenced to be most effective with treatment retention among the three types of MAT.

Patients who become stable on methadone are more likely to see increases in employment, social stability and have stable housing and improved overall health. Certified Opiate Treatment Programs are, however, limited in Ohio, leaving patients in parts of Ohio without access to the most effective treatment.

Patients in treatment often cycle from methadone to buprenorphine to naltrexone and then to medication-free treatment, or transition from any of the MAT prescriptions to a drug-free state, given sufficient time, motivation and support. Some patients remain on maintenance therapy with a particular medication during their lifetime of recovery as is common with chronic disease management for conditions other than addiction, too.

The costs of appropriate MAT are significant, but lack of or inadequate treatment creates an even greater burden to society, states, communities and individuals.

For each person with addiction, the costs may include losses to local economies due to lost work time, jail or prison costs, repeated treatment attempts, and overdose deaths, not to mention traumatic impacts to their children's healthy development, academic progress and lifetime health and success.

In order to expand MAT, education and training should be offered to professionals in behavioral health, child welfare, primary healthcare and the criminal justice systems.

Sobriety Treatment and Recovery Teams

Based on Toledo's ADAPT program, the Sobriety Treatment and Recovery Teams (START) program begun in Cuyahoga County in 1997 is a model now used in New York City as well as in two urban, one rural and one Appalachian site in Kentucky.

Studies in Ohio and Kentucky show that parents in START are nearly twice as successful in achieving sobriety as those not involved in the program. [25] The Kentucky study also showed that 41 percent of children of families treated in the state's standard system were placed in foster care compared to 20 percent of children of START families. Early New York data[26] indicate START parents are more likely to enter treatment and START children less likely to enter foster care.

START provides specialized interventions to families referred to the child welfare system

who have confirmed drug addiction problems. Participation is triggered when a pregnant mother tests positive for substance use in the second or third trimester or an infant tests positive at birth. Mothers who use drugs during pregnancy are more likely to use them after giving birth and, in turn, their children are more likely to be placed in foster care.[27]

Each START social service worker is paired with a family advocate who understands their needs. Most advocates are in recovery and many have been clients of child and family welfare agencies.

The team approach provides stronger engagement and more frequent contact with both the family and treatment providers. Other partners in the network include drug treatment, healthcare and housing providers, neighbors, friends, relatives and other informal sources of support.

START staff is encouraged to rely heavily on informal supports for monitoring children's safety, providing emergency care and, in some cases, ongoing care. In all cases and situations, START relies on the informal network members to support and monitor a family's welfare after formal services have ended.

Every dollar spent on START substance abuse treatment and family mentors in Kentucky saves $2.52 in foster placement costs. [28]

In traditional programs, placement of children of drug-dependent caregivers in foster homes averaged 383 days.[29] For families involved in START in Cuyahoga County, placement averaged 300 days.[30]

Screening and Assessment for Family Engagement, Retention and Recovery

The Screening and Assessment for Family Engagement, Retention and Recovery (SAFERR) program promotes child safety and family well-being by streamlining and coordinating child welfare services, treatment services and actions by the courts overseeing the children and parents.

The SAFERR model,[31] developed jointly by the National Center on Substance Abuse and Child Welfare and the Substance Abuse and Mental Health Services Administration, provides tools for building cross-system collaboration at the local, regional and state levels. The model supports improved multi-system approaches to communication and protocols, screening and assessment, along with case management and treatment interventions.

In Ohio, Butler County has used and adopted segments of SAFERR in local programs. An evaluation[32] of Butler County's Multidisciplinary Treatment Team (MTT) showed that 13.4 percent of families in the MTT program required placement in foster care compared to 32. 1 percent for families in the family drug court program.

Participants in both programs significantly reduced their use of cocaine, marijuana and heroin, with 55 percent in family drug court completing drug treatment and 32 percent in the MTT program completing treatment, compared to a control group's 26 percent.

SAFERR helps child welfare, drug treatment and court staff:

- Create and guide teams that improve services by sharing information and coordinating services.
- Develop clear expectations for the team's mission, authority and accountability.
- Identify and address state policies that block efficient practice.
- Select screening and assessment tools and strategies for daily practice.
- Support and oversee implementation of improved practices.
- Monitor and evaluate success and problems.

Expected outcomes:

- Families are identified more accurately and earlier.
- When entering or participating in substance abuse treatment, potential child maltreatment is identified more accurately and earlier.
- The systems communicate effectively in screening and assessment and in monitoring progress in services.
- Staff will make more informed, timely and shared decisions regarding reunification, after care or continuing services, and filing petitions for termination of parental rights.
- Families will enter and remain in treatment and child welfare services at higher rates.
- Work processes are streamlined.
- Child maltreatment risks are reduced.
- Family stability, reunification and well-being are increased.

Reports indicate that several critical elements were found to increase the success of the model, including co-location of staff for cross-agency communication and services, promoting improved access to services, as well as understanding of each other's systems.[33]

Because families involved in child welfare or substance abuse programs are often involved in welfare, criminal justice and mental health systems, SAFERR suggests extending the same strategies promoting communication and coordination of services. Case managers and court officials who are making decisions on services need clear input from all systems working with a family in order to best address the constellation of problems.

The Child and Family Services Improvement Act Regional Partnership Grant program represents the broadest federal effort ever launched to improve the well-being, permanency and safety outcomes for children at risk of or in out-of-home placement due to parental/caregiver drug abuse. These projects apply elements of the SAFERR model and have supported the development of defined outcomes for improving best practice approaches that can be used as benchmarks to measure progress. Ohio's Lucas and Butler counties have been among the funded sites for these partnerships.[34]

Summary and Recommendations

Ohio's opiate epidemic is of such grave concern that during his first 100 days in office, Governor Kasich created a Cabinet-level Opiate Task Force. Since that time, new policies, investments and initiatives have begun. These include:

- The Ohio Medicaid Expansion that makes more Ohioans, including caregivers, eligible for drug treatment services.
- Continued expansion of Family Dependency Treatment Courts (FDTC) through the Supreme Court of Ohio, which provides four years of grant funding to local courts that implement a FDTC. This expansion was recently supported by an additional $4.4 million grant opportunity to local courts through MHAS for any specialized drug court.
- A Medication Assisted Treatment (MAT) pilot providing $5 million to selected locations that coordinate with providers and local drug courts including FDTCs.
- A Federal Mental Health Block Grant providing $350,000 to support housing for recovering individuals.
- $4.2 million to selected hospitals to support the Maternal Opiate Medical Support (MOMS) Project.

Although all of these efforts indirectly impact the child welfare system, this paper outlines how opiate use is directly impacting the child welfare system, the children and families the system serves and what steps need to be taken to serve them better. Just as the medical community, treatment providers and the courts have had to change their approach to working with persons addicted to opiates, Ohio's Public Children Services Agencies need to change in order to reach better outcomes.

Each best practice we recommend below requires child welfare to provide more intensive and time-consuming case management. This can only happen by adding caseworkers and training. To accomplish this, we need the support of our federal, state and local leaders.

I. Encourage implementation of the Screening and Assessment for Family Engagement, Retention and Recovery (SAFERR) model: Support cross-system collaboration at the local, regional and state level based on the SAFERR model, including increased capacity for technical assistance and training to support the development process. Consider ways to decrease barriers for co-locating staff that build on successful Ohio experiences, such as the Regional Partnership Grants and Protect Ohio. Encourage the development of Memoranda of Understanding between courts, treatment providers, and child welfare agencies that are built on the foundations of the SAFERR model.

II. Increase the number of Family Dependency Treatment Courts: Ohio has 16 Family Drug Treatment Courts and should increase the number across the state. The Supreme Court of Ohio with support of the Ohio Department of Mental Health and Addiction Services (OhioMHAS) and the Ohio Department of Job and Family Services (ODJFS) submitted a grant application to the Office of Juvenile Justice Delinquency Prevention for $300,000 over a 24-month period to

address the scale and scope of Ohio's family dependency treatment courts. If Ohio obtains the grant, after the initial 24-month period of funding, Ohio may be invited to apply for additional funding up to $2 million for an additional three-year time period to implement its plan to address scale and scope issues for family dependency treatment courts. In the meantime, $4.4 million to expand the state's existing drug courts, including FDTCs, is available through OhioMHAS. The Supreme Court of Ohio typically selects one to two courts per year for the start-up funding and expects recipient courts to earn SCO certification. The high court seeks two dockets for 2015.

III. Establish time-limited prioritization of drug treatment counseling and recovery services for child welfare cases as required by 122nd-HB 484, Ohio's Adoption and Safe Families Act. The act demands that children services agencies, drug and alcohol treatment providers and juvenile courts assure timely assessments, services and permanency decisions for children of substance-abusing parents.

IV. Increase access to Medication Assisted Treatment (MAT): Medication Assisted Treatment (MAT) is not just a best practice but the standard of care for this population. All three forms of Medication Assisted Treatment (agonist, partial agonist and antagonist) should therefore be available for all parents in the child welfare system where opiate addiction has been determined. MAT significantly decreases relapse rates and greatly increases the likelihood of success in transitioning patients into long-term recovery. Medications combined with behavioral therapy are the gold standard in promoting long-term chronic disease management and recovery for people with opioid dependency and addiction. MAT should be available for all parents in the child welfare system where opiate addiction has been determined. To accomplish this, education and training should be offered to professionals in behavioral health, child welfare, primary healthcare and the criminal justice systems to support an increased understanding of the importance of MAT. In addition, policies and resources should support availability of and timely access to MAT for child welfare-involved parents with opioid addiction. The Governor's Cabinet Opiate Action Team has created a small pilot with streamlined Medicaid pre-authorization procedures, and this could be replicated for Medicaid-eligible parents in the child welfare system.

V. Expand access to recovery support and intensive child welfare case management: Evaluations show that Sobriety Treatment and Recovery Teams (START) programs using the Annie E. Casey Foundation model of pairing a child protective services caseworker with a parent mentor helped reunify children and parents twice as effectively as traditional programs. The model should expand to additional counties.

Child Welfare Opiate Engagement Project Committee Members

Name	Organization
Timothy Dick, Co-Chair	Clermont County Children Services
*Orman Hall, Co-Chair	Governor's Cabinet Opiate Action Team
Crystal Ward Allen	Casey Family Programs
Gayle Channing Tenenbaum	Public Children Services Association of Ohio
Maureen Corcoran	Vorys Healthcare Advisors
*Sandy Starr	Ohio Department of Mental Health and Addiction Services
*Dr. Mark Hurst	Ohio Department of Mental Health and Addiction Services
*Matt Loncaric	Ohio Department of Mental Health and Addiction Services
*Brad DeCamp	Ohio Department of Mental Health and Addiction Services
Pat Rideout	Cuyahoga County Division of Child and Family Services
Cynthia Weiskittel	Cuyahoga County Division of Child and Family Services
Sharla O'Keeffe	Morrow County Job and Family Services
Dr. Lorra Fuller	Scioto County Children Services
Deanna Nichols-Stika	Wayne County Children Services
Cheri Walter	Ohio Association of County Behavioral Health Authorities
Lori Criss	The Ohio Council of Behavioral Health & Family Services Providers
*Roger Ward	Ohio Department of Job and Family Services
*Jennifer Justice	Ohio Department of Job and Family Services
*Mary Haller	Ohio Department of Medicaid
*Patrick Beatty	Ohio Department of Medicaid
*Dr. Mary Applegate	Ohio Department of Medicaid
Christine Raffaele	Supreme Court of Ohio
Melinda Sykes Haggerty	Ohio Attorney General's Office
Veronica Paulson	Ohio Attorney General's Office
Elizabeth Ranade-Janis	Office of Criminal Justice Services
Rick Frank	Ohio Hospital Association

*Subject Matter Experts

Endnotes

[1] Young, N.K., Boles, S.M., Otero, C. (2007, May) Parental Substance use Disorders and Child Maltreatment: Overlaps, Gaps, and Maltreatment. *Child Maltreatment*, 12 (2), 137-149. DOI: 10.1177/1077559507300322

[2] Marlowe, D.B., Carey, S.M. (2012, May) Research Update on Family Drug Courts. *Need to Know,* 1. Available at: http://www.nadcp.org/sites/default/files/nadcp/Reseach%20Update%20on%20Family%20Drug%20Courts%20-%20NADCP.pdf

[3] Boros, D.L., Dick, T., Allen, C.W. (2014, July) Opiates Impact & Child Welfare. *Safe children, Strong Families, Supportive Communities*, 5. Available at: http://www.pcsao.org/Presentations/2014/CWOpiateEngmtProject7114.pdf

[4] Ward, R. (2014, July) Heroin, Cocaine and Child Protection, 10,11,15,16. Available at: http://www.pcsao.org/Presentations/2014/OpiateConfRogerWardsPresentation.pdf

[5] Ward, R. (2014, July) Heroin, Cocaine and Child Protection, 16. Available at: http://www.pcsao.org/Presentations/2014/OpiateConfRogerWardsPresentation.pdf

[6] Ward, R. (2014, July) Heroin, Cocaine and Child Protection, 6,9. Available at: http://www.pcsao.org/Presentations/2014/OpiateConfRogerWardsPresentation.pdf

[7] Substance Abuse and Mental Health Services Administration. *Supporting Infants, Toddlers, and Families Impacted by Caregiver mental Health Problems, Substance Abuse, And Trauma: A Community Action Guide,* 13,16,24. Available at: http://store.samhsa.gov/shin/content/SMA12-4726/SMA12-4726.pdf

[8] Bugental, G.B., Martorell, G.A., Barazza, V. (2003) The hormonal costs of subtle infant maltreatment. *Hormones and Behavior,* 43 (1) 237-255. Available at: https://labs.psych.ucsb.edu/bugental/daphne/hormones&behavior.2003.pdf

[9] Carlson, B.E. (2006) Best Practices in the treatment of substance abusing women in the child welfare system. *Journal of Social Work Practice in the Addictions,* 6(3) 97-115. Available at: http://www.researchgate.net/publication/232882374_Best_Practices_in_the_Treatment_of_Substance-Abusing_Women_in_the_Child_Welfare_System

[10] Posze, M.A., Huebner, R.A., Willauer, T.M. (2013, April) Rebuilding a Family Bond. *Addiction Professional,* 1-4. Available at: http://www.addictionpro.com/article/rebuilding-family-bond

[11] Ward, R. (2014, July) Heroin, Cocaine and Child Protection, 16. Available at: http://www.pcsao.org/Presentations/2014/OpiateConfRogerWardsPresentation.pdf

[12] Marlowe, D.B., Carey, S.M. (2012, May) Research Update on Family Drug Courts. *Need to Know,* 1-10. Available at: http://www.nadcp.org/sites/default/files/nadcp/Reseach%20Update%20on%20Family%20Drug%20Courts%20-%20NADCP.pdf

[13] Bruns, E.J., Pullmann, M.D., Weathers, E.S., Wirschem, M.L., Murphy, J.K. (2012) Effects of a Multidisciplinary Family Treatment Drug Court on Child and Family Outcomes: Results of a Quasi-Experimental Study. *Child Maltreatment,* 17(3) 218-230. Available at: http://cmx.sagepub.com/content/17/3/218.abstract

[14] Green, B.L., Furrer, C.J., Worcel, S.D., Burrus, S.W.M., Finigan, M.W. (2009) Building The Evidence Base For Family Drug Treatment Courts: Results from recent outcome studies. *Drug Court Review,* 6, 53-82. Available at: http://www.ndcrc.org/sites/default/files/dcr_vi._ii_summer_2009_0.pdf

[15] Harwin, J., Ryan, M., Tunnard, J., Pokhrel, S., Alrouh, B., Matias, C., Momenian-Schneider, S. (2011, May) *The Family Drug and Alcohol Court (FDAC) Project Evaluation Final Report.* London: Brunel University. Available at: http://www.brunel.ac.uk/__data/assets/pdf_file/0017/91340/fdac_final_report.pdf

[16] Oliveros, A., Kaufman, J. (2011) Addressing Substance Treatment Needs of Parents Involved With The Child Welfare System. *Child Welfare,* 90, 25-41. Available at: http://www.ncbi.nlm.nih.gov/pubmed/21950173

[17] Burrus, S.W.M., Mackline, J.R., Aborn, J.A. (2008) *Baltimore City Family Recovery Program (FRC) Independent Evaluation: Outcome and Cost Report.* Portland, OR: NPC Research. Available at: http://www.npcresearch.com/Files/Baltimore_City_FRC_Outcome_and_Cost_0808.pdf

[18] Carey, S.M., Sanders, M.B., Waller, M.S., Burrus, S.W.M., Aborn, J.A. (2010, June). *Jackson County Community Family Court Process, Outcome and Cost Evaluation: Final Report:* Portland, OR: NPC Research. Available at: http://www.oregon.gov/CJC/docs/jackson_byrne_final_report_june_2010.pdf

[19] Carey, S.M., Sanders, M.B., Waller, M.S., Burrus, S.W.M., Aborn, J.A. (2010, March). *Marion County Fostering Attachment Treatment Court—Process, Outcome and Cost Evaluation: Final Report:* Portland, OR: NPC Research. Available at: http://www.npcresearch.com/Files/Marion_Byrne_Final_0610.pdf

[20] Boles, S.M., Young, N.K., Moore, T., DiPirro-Beard, S. (2007) The Sacremento Dependency Drug Court: Development and Outcomes. *Child Maltreatment* 12 (2), 161-171. DOI: 10.1177/1077559507300643

[21] Ohio Department of Alcohol and Drug Addiction Services (2011) Medication Assisted Treatment: Proposed Low-Dose Protocol for Buprenorphine and Suboxone: *Medication-Assisted Treatment Policy Statement,* 3. Available at: http://mha.ohio.gov/Portals/0/assets/Treatment/OpiatesMAT/Buprenorphine%20and%20Suboxone%20Low%20Dose%20Protocol%20for%20web.pdf

[22] Christensen, R., (undated) Opiate Dependence and Its Treatment. Community Medical Services, Phoenix, AZ. Available at: http://communitymedicalservices.org/opiate-dependence-and-its-treatment-4.html

[23] Center for Substance Abuse Treatment (2008). *Medication-Assisted Treatment for Opioid Addiction in Opioid Treatment Programs In-service Training.* Available at: http://store.samhsa.gov/shin/content//SMA09-4341/SMA09-4341.pdf

[24] National Association of State Alcohol and Drug Abuse Directors Consensus Statement on the Use of Medication-Assisted Treatment of Substance Abuse Disorders. (2013) Available at: http://nasadad.org/wp-content/uploads/2010/12/NASADAD-Statement-on-MAT.pdf

[25] Huebner, R. A., Willauer, T.M., Posze M.A. (2012). The impact of Sobriety Treatment and Recovery Teams (START) on family out-comes. *Families in Society: The Journal of Contemporary Social Services,* 93,196-203. Available at: http://alliance1.metapress.com/content/qn072v715p242446/

[26] Wildfire J., Green, R. (2011, June) , START Evaluation *Final Report,* 24-26.

[27] Smith, D.K., Johnson, A.B., Pears, K.C., Fisher, P.A., DeGarmo, D.S. (2007, May) Child Maltreatment and Foster Care: Unpacking the Effects of Prenatal and Postnatal Parental Substance Use. *Child Maltreatment,* 12(2), 150-160. DOI: 10.1177/1077559507300129

[28] Pozse, M.A., Huebner, R.A., Willauer, T.M. (2013, April) Rebuilding a Family Bond. *Addiction Professional,* 1. Available at: http://www.addictionpro.com/article/rebuilding-family-bond

[29] Carey, S.M. (2013) Family Drug Treatment Court Costs and Best Practices: What Do We Know So Far? 19. Available at: http://www.npcresearch.com/Files/Conference%20presentations/Family_Treatment_Court_Costs_and_Best_Practices.pdf

[30] Cuyahoga County Department of Child and Family Services, CQI Department, Data Analysis Unit. (2011, June).

[31] National Center on Substance Abuse and Child Welfare (2006) Screening and Assessment for Family Engagement, Retention and Recovery. Available at: http://www.ncsacw.samhsa.gov/files/SAFERR.pdf

[32] Bush, K., (undated) Evaluation of Butler County's Child Abuse and Neglect Substance Abuse Focus Expansion (CANSAFE). Children and Family Futures: Children's Bureau Regional Partnership Grants. Available at: http://www.cffutures.org/files/rpgprofiles/Array%20of%20Services%20Cluster/Butler%20County%20Children%20Services%20%28BCCS%29.pdf

[33] Children and Family Futures: Children's Bureau Regional Partnership Grants. Available at: http://www.cffutures.com/projects/rpg

[34] Lovins, B., (undated) Evaluation of Lucas County Pre-Removal Family Drug Court Program. Children and Family Futures: Children's Bureau Regional Partnership Grants. Available at: http://www.cffutures.org/files/rpgprofiles/Drug%20Court%20Cluster/County%20of%20Lucas.pdf

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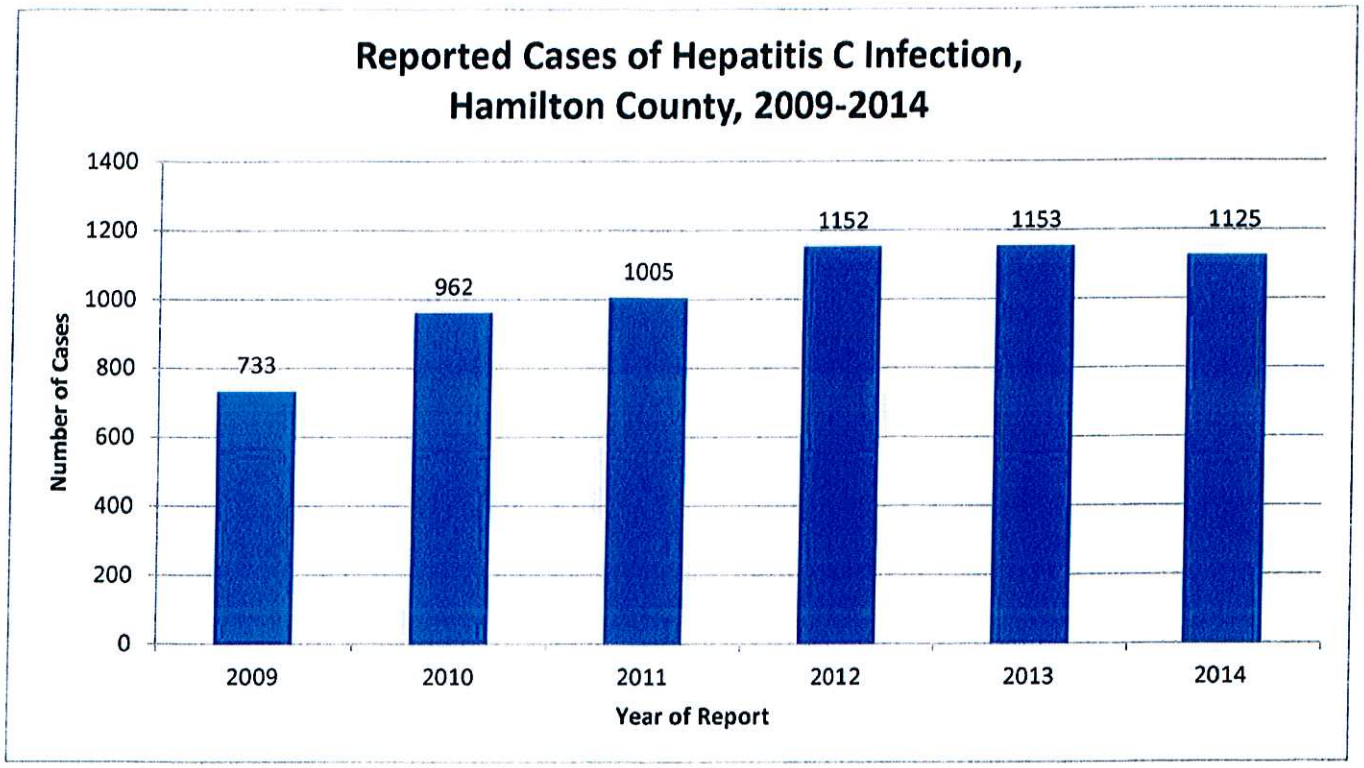

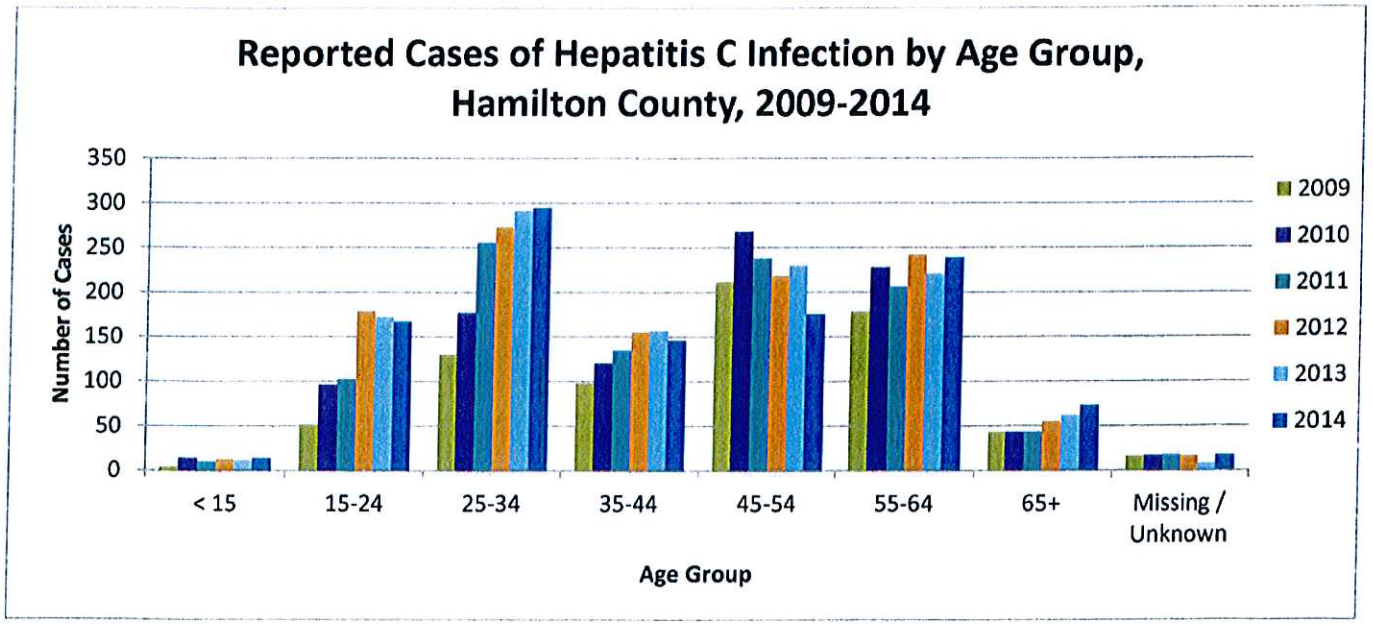

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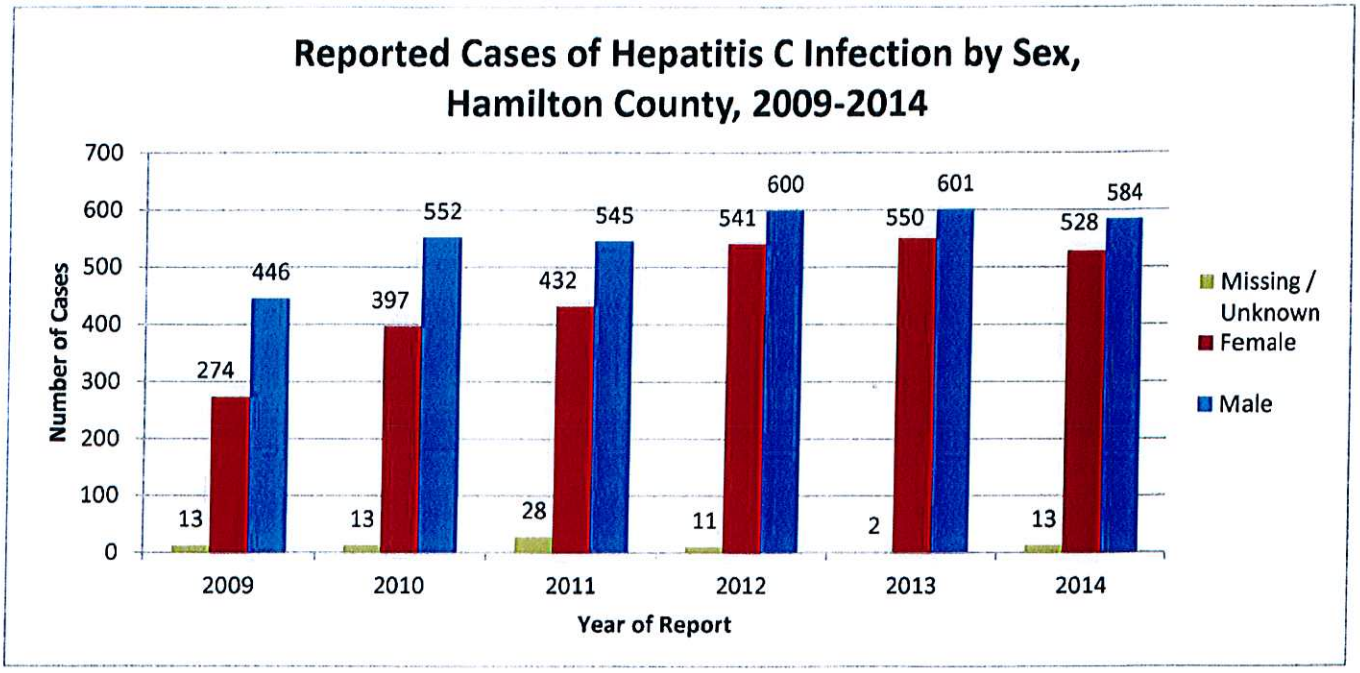

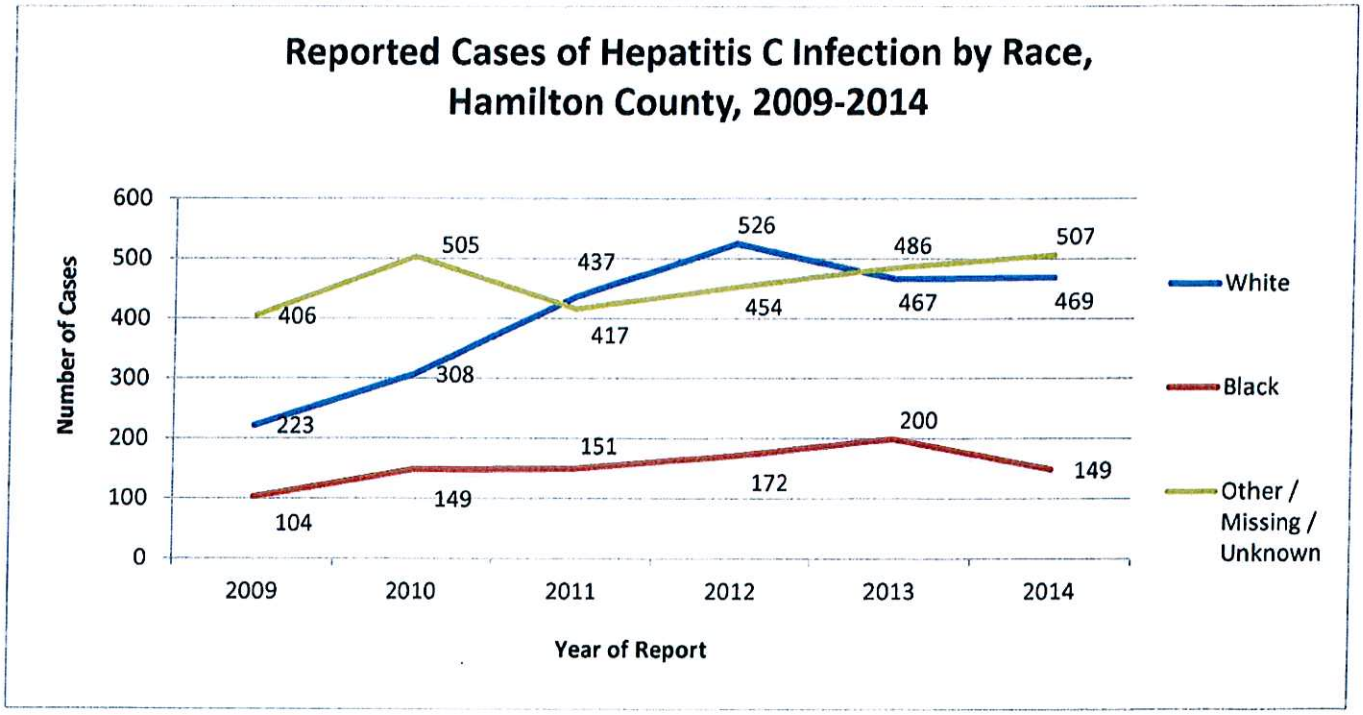

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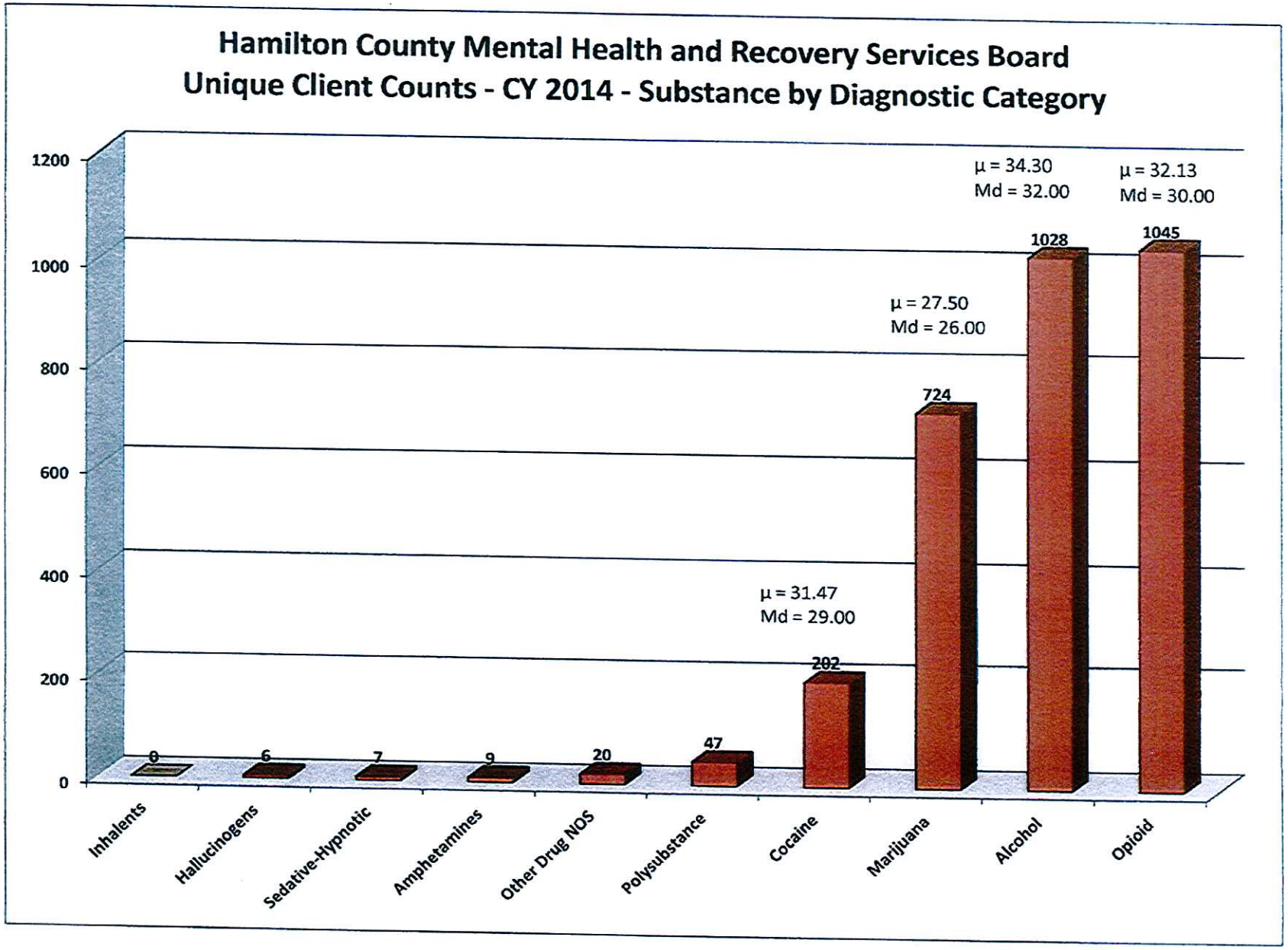
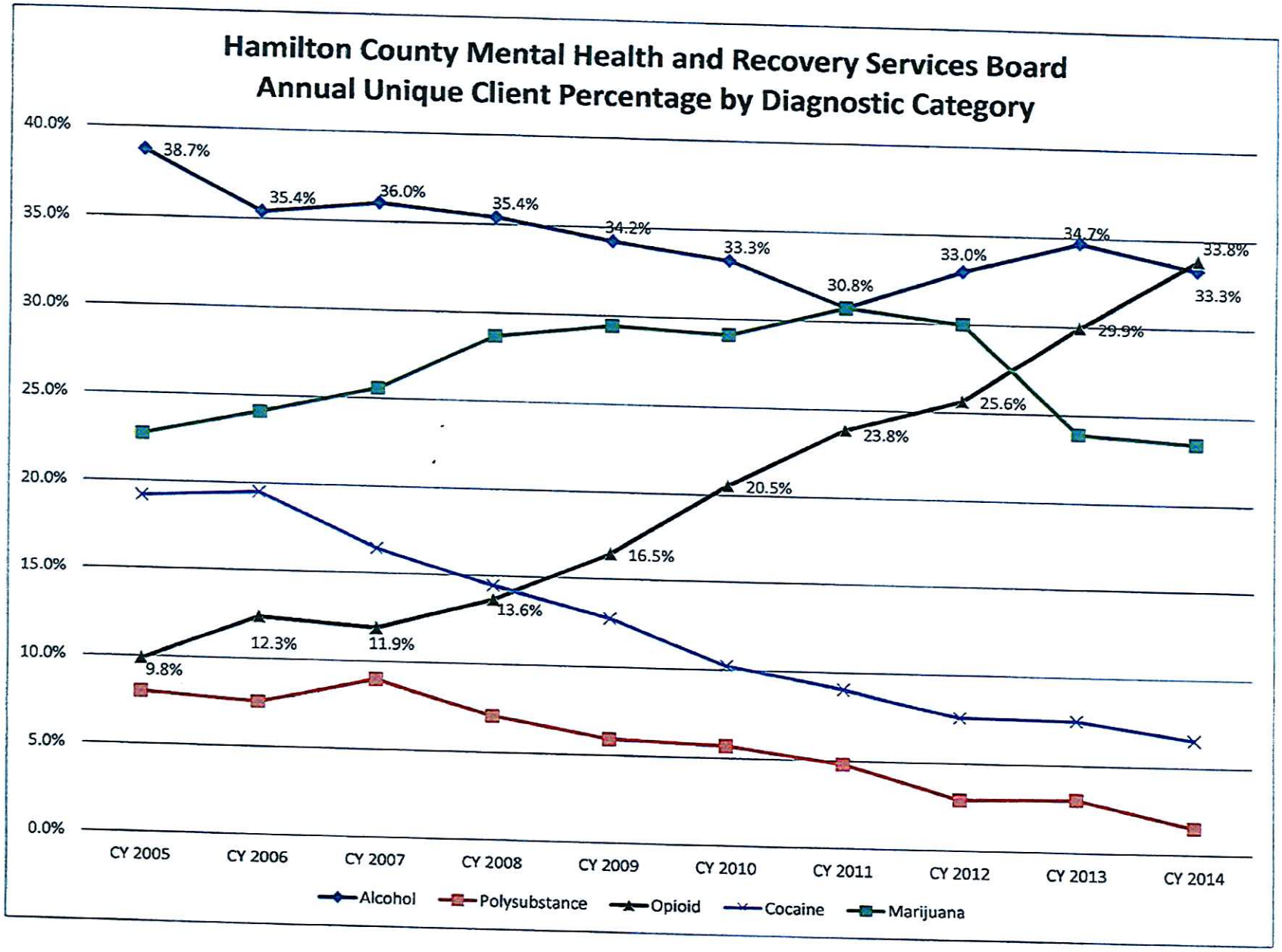
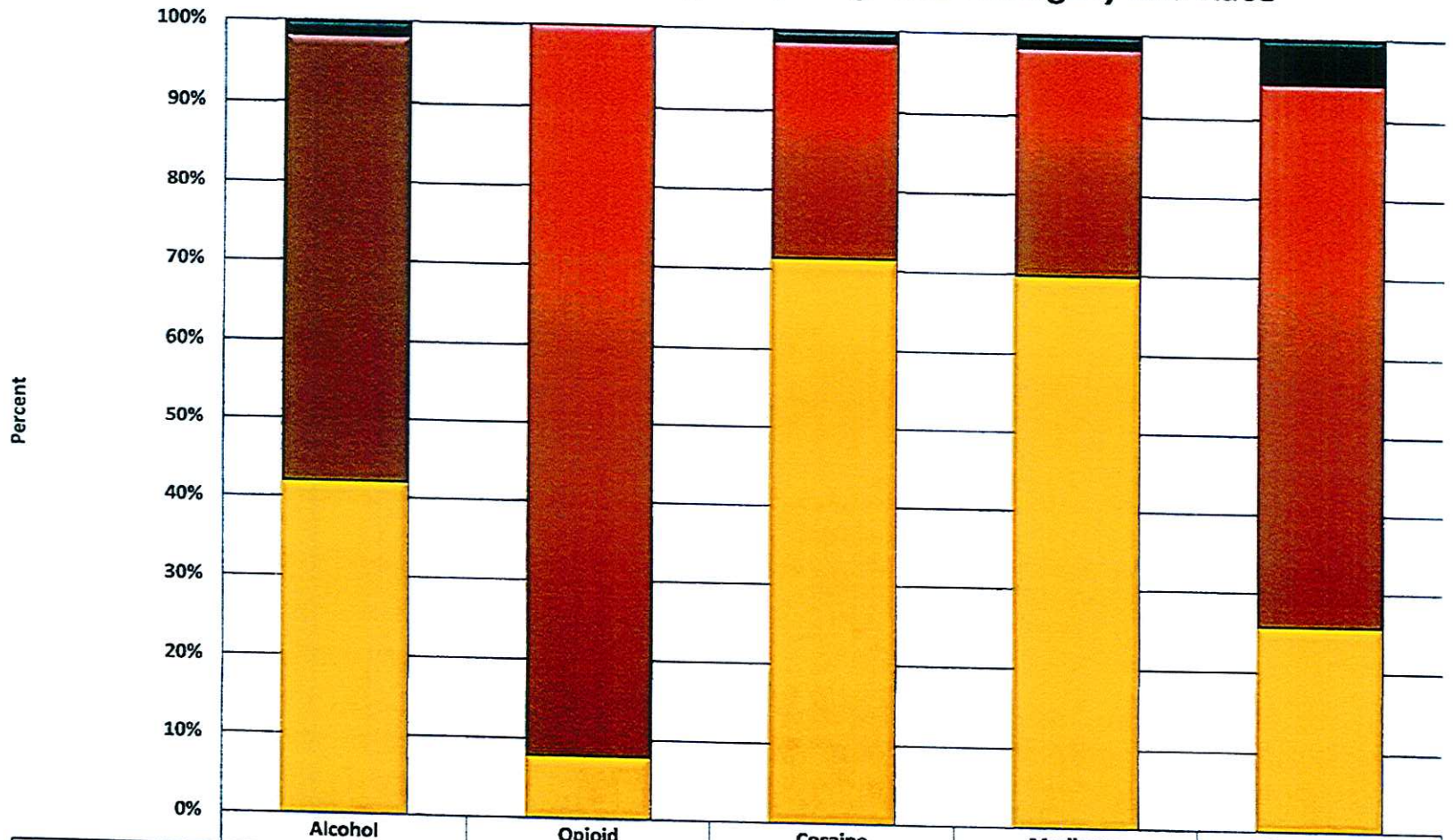
Source: Ohio Department of Health, Ohio Disease Reporting System (ODRS). Data accessed 3/30/15. Data are provisional and subject to change.

Notes: Suspected, probable, & confirmed cases of both acute and chronic hepatitis C infections are included in counts. Cases of chronic hepatitis C comprised 99% (n=6070) of the total hepatitis C infections reported during 2009-2014.


Hamilton County Mental Health and Recovery Services Board
Unique Client Counts - CY 2014 - Substance by Diagnostic Category
1200
1000
800
600
400
200
0
μ = 34.30
Md = 32.00
μ = 32.13
Md = 30.00
μ = 27.50
Md = 26.00
μ = 31.47
Md = 29.00
0
6
7
9
20
47
202
724
1028
1045
Inhalents
Hallucinogens
Sedative-Hypnotic
Amphetamines
Other Drug NOS
Polysubstance
Cocaine
Marijuana
Alcohol
Opioid

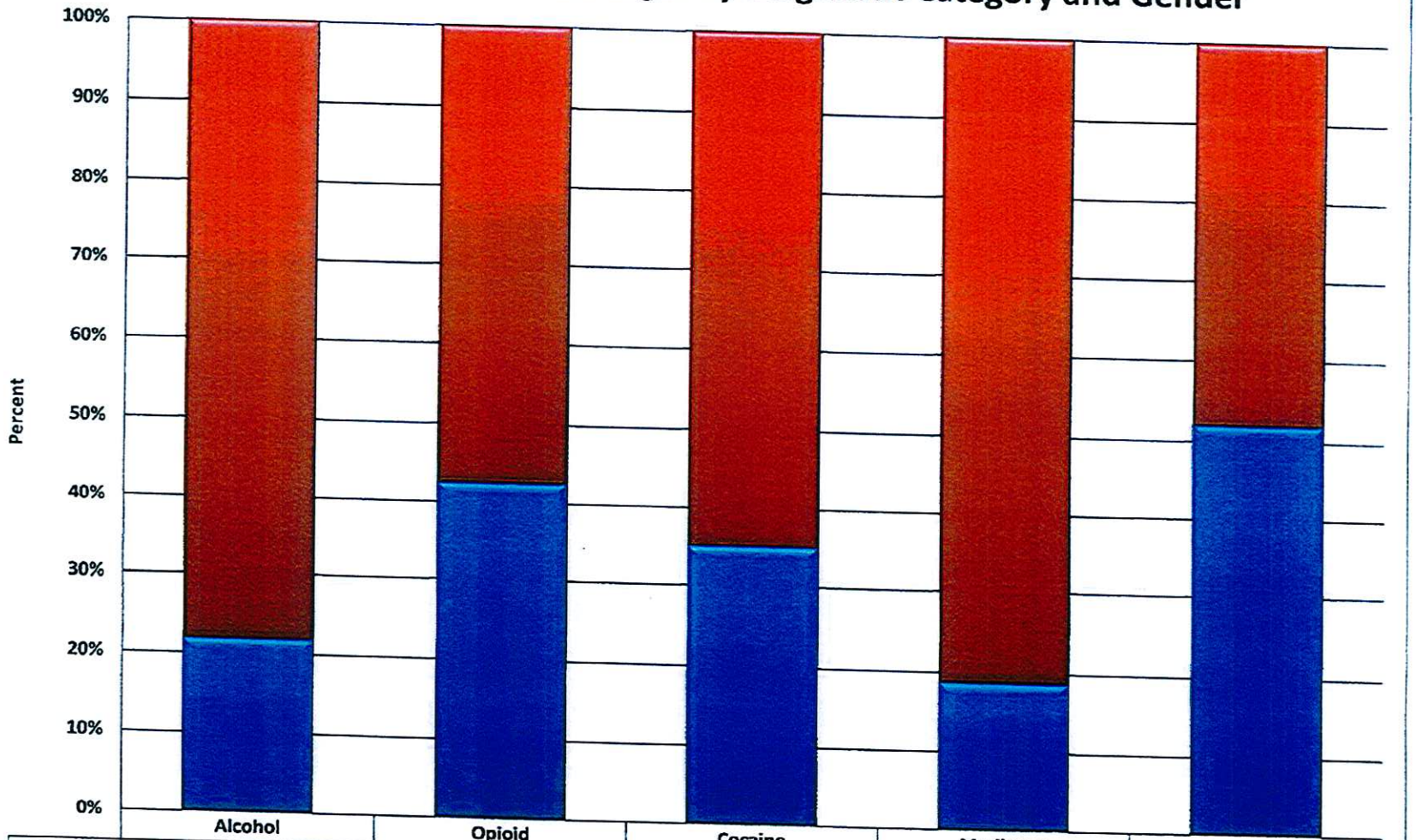

Hamilton County Mental Health and Recovery Services Board
Annual Unique Client Percentage by Diagnostic Category
40.0%
35.0%
30.0%
25.0%
20.0%
15.0%
10.0%
5.0%
0.0%
38.7%
35.4%
36.0%
35.4%
34.2%
33.3%
30.8%
33.0%
34.7%
33.3%
9.8%
12.3%
11.9%
13.6%
16.5%
20.5%
23.8%
25.6%
29.9%
33.8%
CY 2005
CY 2006
CY 2007
CY 2008
CY 2009
CY 2010
CY 2011
CY 2012
CY 2013
CY 2014
Alcohol
Polysubstance
Opioid
Cocaine
Marijuana

Hamilton County Mental Health and Recovery Services Board
CY 2014 Unique Client Percentages by Diagnostic Category and Race

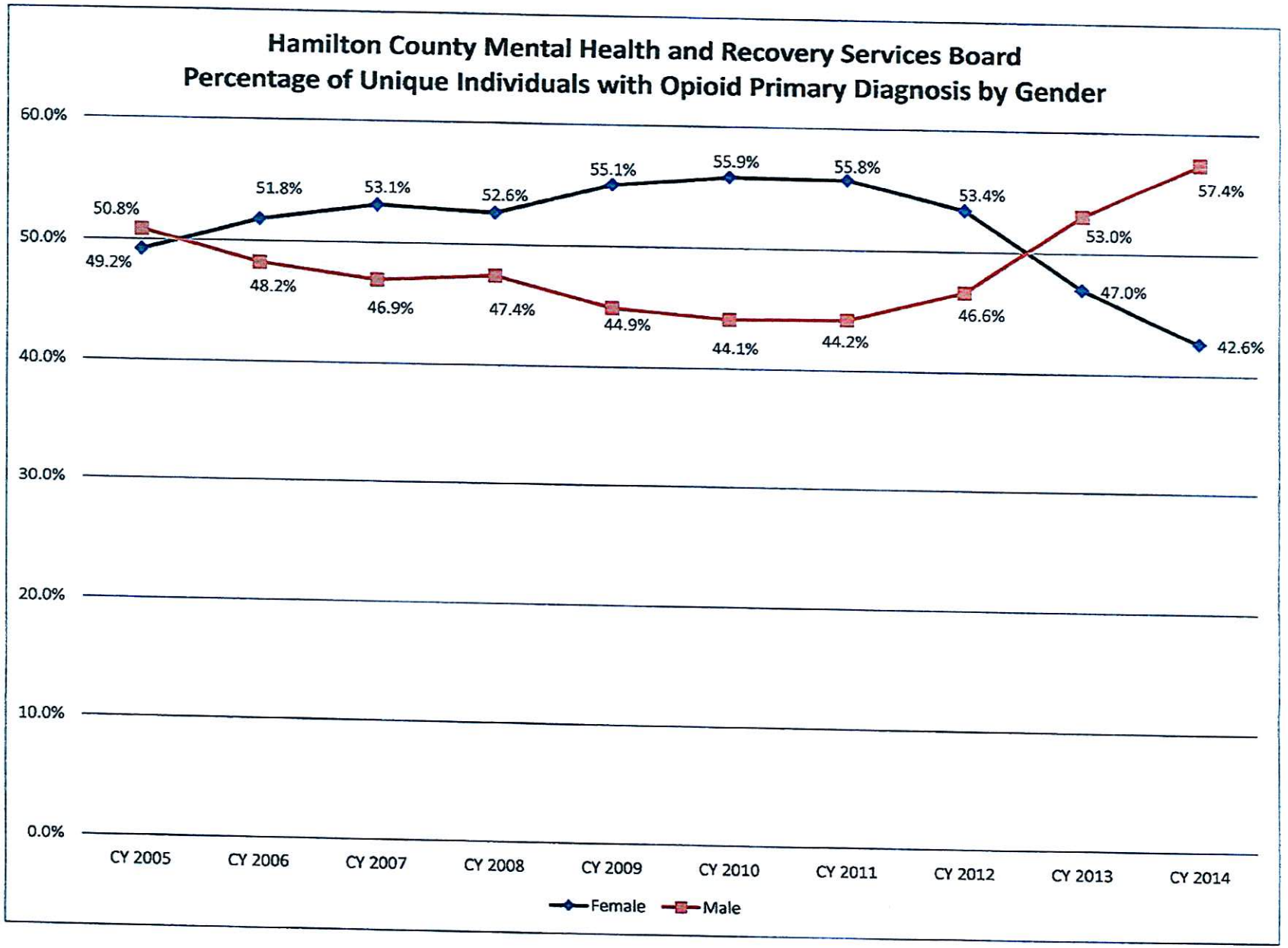


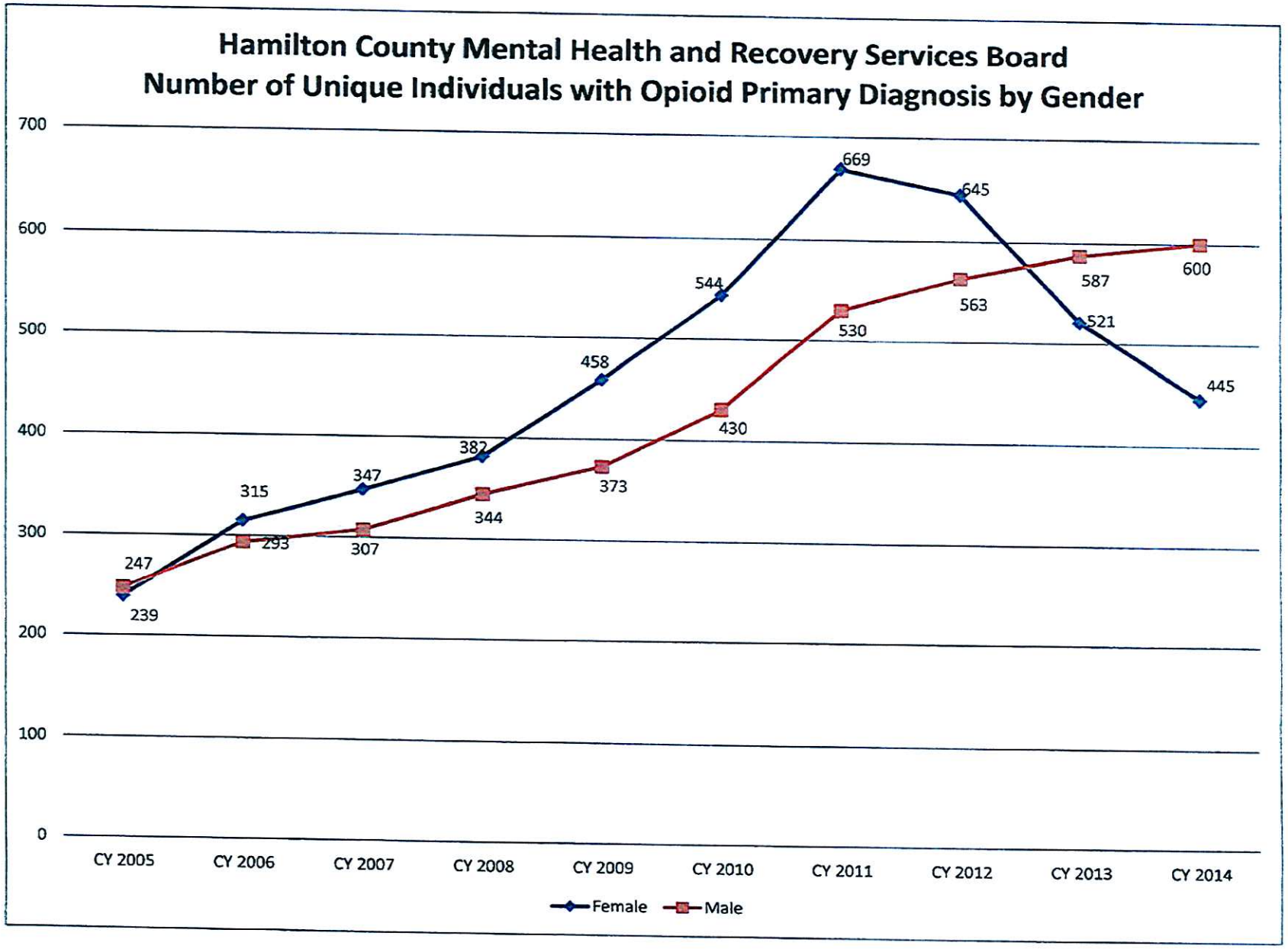
	Alcohol	Opioid	Cocaine	Marijuana	County Pop.
Other	1.8%	0.0%	1.5%	1.7%	5.5%
% White	56.2%	91.5%	27.2%	28.6%	68.8%
% African-American	41.9%	7.7%	71.3%	69.8%	25.7%

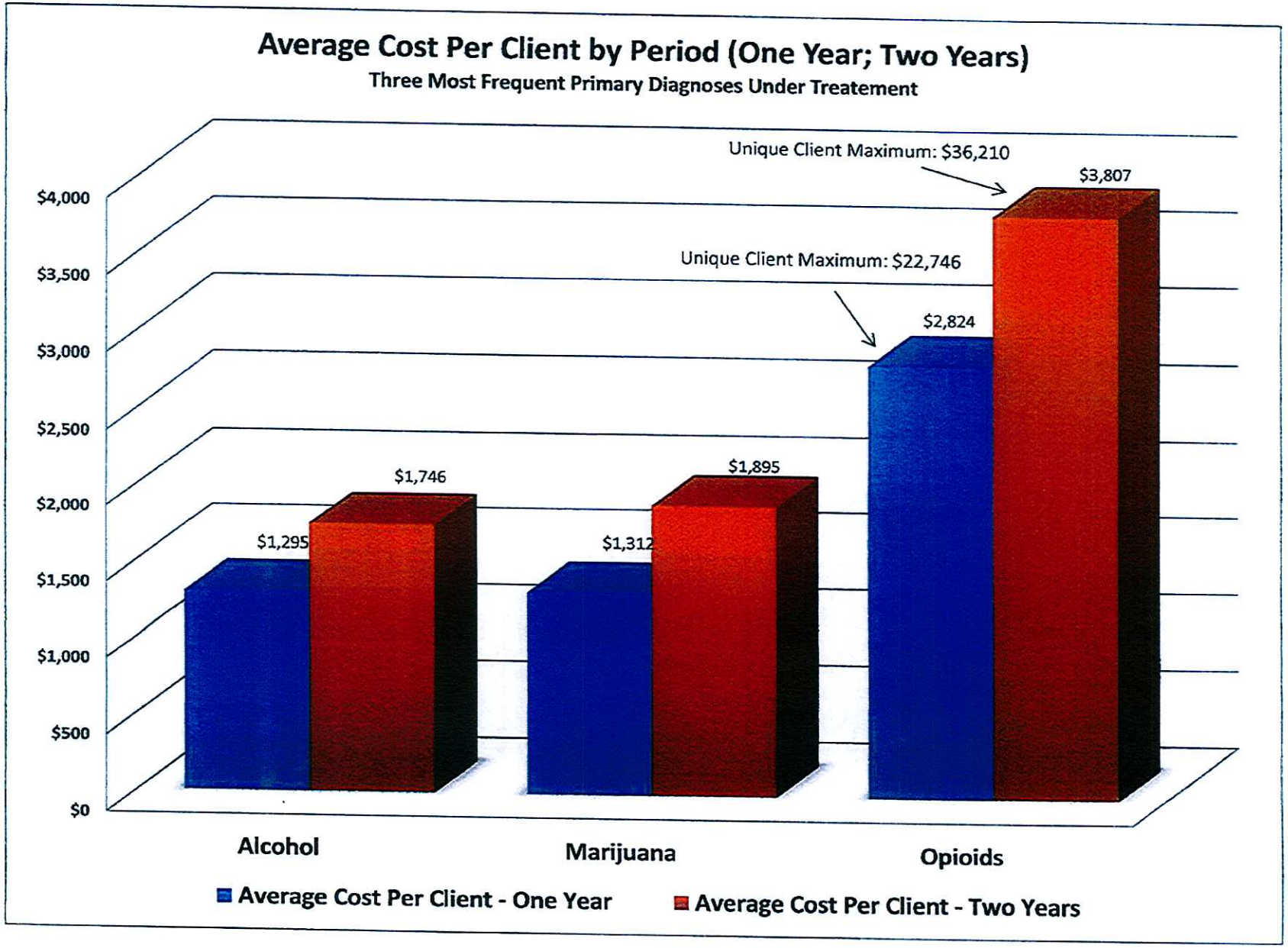
Hamilton County Mental Health and Recovery Services Board
CY 2014 Unique Client Percentages by Diagnostic Category and Gender



	Alcohol	Opioid	Cocaine	Marijuana	County Pop.
% Male	78.1%	57.4%	64.9%	81.2%	48.0%
% Female	21.9%	42.6%	35.1%	18.8%	52.0%


Hamilton County Mental Health and Recovery Services Board
Percentage of Unique Individuals with Opioid Primary Diagnosis by Gender
60.0%
50.0%
40.0%
30.0%
20.0%
10.0%
0.0%
50.8%
51.8%
53.1%
52.6%
55.1%
55.9%
55.8%
53.4%
47.0%
42.6%
49.2%
48.2%
46.9%
47.4%
44.9%
44.1%
44.2%
46.6%
53.0%
57.4%
CY 2005
CY 2006
CY 2007
CY 2008
CY 2009
CY 2010
CY 2011
CY 2012
CY 2013
CY 2014
Female
Male


Hamilton County Mental Health and Recovery Services Board
Number of Unique Individuals with Opioid Primary Diagnosis by Gender
700
600
500
400
300
200
100
0
239
315
347
382
458
544
669
645
521
445
247
293
307
344
373
430
530
563
587
600
CY 2005
CY 2006
CY 2007
CY 2008
CY 2009
CY 2010
CY 2011
CY 2012
CY 2013
CY 2014
Female
Male


Average Cost Per Client by Period (One Year; Two Years)
Three Most Frequent Primary Diagnoses Under Treatement
Unique Client Maximum: $36,210
Unique Client Maximum: $22,746
$4,000
$3,500
$3,000
$2,500
$2,000
$1,500
$1,000
$500
$0
$1,295
$1,746
$1,312
$1,895
$2,824
$3,807
Alcohol
Marijuana
Opioids
Average Cost Per Client - One Year
Average Cost Per Client - Two Years

Hamilton County Mental Health and Recovery Services Board
Current AOD Outcomes Structure

Alcohol and Other Drug Performance Management System (OhioMHAS)

The purpose of the state quality management system for alcohol and other drug treatment services is to collect and use information to improve efficiencies or show the effectiveness of services. OhioMHAS is using two treatment measures at four levels to implement the system. The two measures are retention and disposition at discharge, and the four levels are provider, board, region and state.

Abstinence National Outcome Measure

All contracted agencies receiving AOD treatment funds through Hamilton County MHRSB are required to assess clients through a chemical test within 30 days of case closure to confirm abstinence at time of discharge.

Criminal Justice Outcome Measure

All contracted agencies receiving AOD treatment funds through Hamilton County MHRSB are required to monitor and report the number of arrests for each client that occur within 30 days of service inception and at case closure. Data capture occurs through the state's Ohio Behavioral Health (OHBH) system and is extracted to the board for analysis and reporting purposes.

Brief Addiction Monitor (BAM)

Implementation of the Brief Addiction Monitor is scheduled for November 1, 2015, with methods, analytics, and reporting procedures developed collaboratively between the three largest urban boards in Ohio. The BAM has been integrated as a component of the Shared Health and Recovery Enterprise System (SHARES) data management system, currently in testing phase.

The BAM was developed by the Veteran's Administration for the purposes of assessing AOD patient outcomes, providing an efficient treatment progress monitoring tool, and clinically measuring patients' substance use, relapse risk, and recovery-oriented behaviors. Attributes include:

- Brief (17 items; approximately 5 minute completion time)
- Multi-dimensional
- Derived from valid/reliable measures
- Data readily integrated into treatment planning
- Flexibility in response option format (categorical or continuous)
- Based upon extant research on relapse predictors

Hamilton County Mental Health and Recovery Services Board
HCHC Treatment Agencies

Addiction Services Council Ms. Nan Franks Chief Executive Officer 2828 Vernon Place Cincinnati, OH 45219 **513-281-7880** (FAX) 513-281-7884 *nanf@addictionservicescouncil.org*	**Center for Chemical Addictions Treatment** Ms. Sandra L. Kuehn President/CEO 830 Ezzard Charles Drive Cincinnati, OH 45214 **513-381-6672** (FAX) 513-381-6086 *skuehn@ccatsober.org*
Central Community Health Board Mr. Bennett J. Cooper, Jr. Executive Director 532 Maxwell Place Cincinnati, OH 45219 **513-559-2000 or 2913** (FAX) 513-559-2020 *bennett@cchbinc.com*	**The Crossroads Center** Ms. Elizabeth Osinbowale Executive Director/CEO 311 Martin Luther King Dr. East Cincinnati, OH 45220 **513-475-5359** (FAX) 513-475-5394 *eosinbowale@thecrossroadscenter.com*
First Step Home, Inc. Ms. Margo Spence Executive Director 2203 Fulton Ave. Cincinnati, OH 45206 **513-961-4663** (FAX) 513-961-4681 *margo.spence@firststephome.org*	**Prospect House, Inc.** Mr. David Logan Executive Director 682 Hawthorne Ave. Cincinnati, OH 45205 **513-921-1613** (FAX) 513-921-4244 *dlogan@prospect-house.org*
Talbert House, Inc. Mr. Neil F. Tilow President 2600 Victory Pkwy. Cincinnati, OH 45206 **513-751-7747** (FAX) 513-751-8107 *neil.tilow@talberthouse.org*	**Urban Minority Alcoholism and Drug Abuse Outreach Program (UMADAOP)** Dr. Kamaria Tyehimba Executive Director/CEO 3021 Vernon Place, Suite 2 Cincinnati, OH 45219 **513-541-7099** (FAX) 513-541-0989 *cinumadaop@fuse.net*

Required HCHC Funding for Proposed Opiate Treatement Services

OPIATE TREATMENT SERVICES	TOTAL COST	MEDICAID/ OTHER FUNDED	HCHC FUNDED
Detox	$977,095.00	$0.00	$977,095.00
MAT	$3,101,399.00	$2,304,288.00	$797,111.00
Outpatient	$8,843,212.00	$6,884,372.00	$1,958,840.00
Residential	$2,937,830.00	$1,678,451.00	$1,259,379.00
Sub-Total Treatment Services	**$15,859,536.00**	**$10,867,111.00**	**$4,992,425.00**
Prevention	$996,764.00	$555,660.00	$441,104.00
TOTAL TREATMENT/PREVENTION SERVICES	**$16,856,300.00**	**$11,422,771.00**	**$5,433,529.00**

Implementation Timeline

The following services represent short and long term priorities identified by HCMHRSB and providers.

Immediate Capacity Expansion (30-90 days+) Estimated Cost- $2,223,702

1. **Medication Assisted Treatment (MAT)= 413 additional clients served**
2. **Detox = 260 additional clients**
3. **Residential beds = 168 additional clients**
4. **Outpatient treatment = 250 additional clients**

It is crucial that once a person receives detox or MAT, that an immediate connection to ongoing treatment services is established to assist in their recovery. Within a period of 90 days to two years, the following could be implemented to address needs going forward. These costs include staff hiring, training, development of space, etc.

Extended Capacity Expansion (90 days+) Estimated Cost- $2,768,723

1. **MAT= 831 additional clients served**
2. **Detox -260 additional clients**
3. **Residential beds= 340 additional clients**
4. **Outpatient treatment = 1,800 additional clients**

Prevention services have not been included above, however, with $441,104 a prevention program could be implemented within a short time period.

RESTORATION OF FUNDING TO 2013 LEVELS

OPIATE TREATMENT SERVICES	TOTAL COST	MEDICAID/ OTHER FUNDED	HCHC Funding Needed
Assessment	$353,248.00	268,998.00	$84,250.00
Laboratory Urinalysis	$491,760.00	334,656.00	$157,104.00
Individual Counseling	$699,357.00	553,717.00	$145,640.00
Group Counseling	$712,040.00	538,577.00	$173,463.00
Case Management	$485,899.00	311,961.00	$173,938.00
Crisis Intervention	$68,423.00	45,369.00	$23,054.00
Intensive Outpatient	$955,542.00	781,101.00	$174,441.00
Family Counseling	$29,326.00	23,461.00	$5,865.00
Medical/Somatic	$189,908.00	152,279.00	$37,629.00
Methadone Administration	$849,673.00	798,320.00	$51,353.00
Medication-Assisted Treatment	$165,383.00	145,076.00	$20,307.00
Sub-Acute Detox	$376,495.00		$376,495.00
Non-Medical Community Residential	$102,000.00		$102,000.00
Room & Board Jail treatment-Levy	$337,260.00		$337,260.00
buprenorphone/naloxone services (no meds)			
Room & Board Community (ADAPT)	$169,360.00		$169,360.00
Room & Board	$884,544.00	693,001.00	$191,543.00
TOTAL TREATMENT SERVICES	**$6,870,218.00**	**4,646,516.00**	**$2,223,702.00**

PREVENTION & COMMUNITY SERVICES	TOTAL COST	OTHER FUNDED	OTHER HEROIN FUNDING NEEDED
Referral & Information	37,983.00	25,576.00	12,407.00
Outreach	64,869.00	54,042.00	10,827.00
Consultation			0.00
Information Dissemination	39,434.00	30,207.00	9,227.00
Education	91,556.00	51,862.00	39,694.00
Community-Based Process	109,656.00	39,342.00	70,314.00
Environmental	57,364.00	34,804.00	22,560.00
Problem Identification and Referral	93,174.00	66,383.00	26,791.00
Alternatives	12,916.00	8,614.00	4,302.00
Recovery Supports			
TOTAL PREVENTION & COMMUNITY SERVICES	**506,952.00**	**310,830.00**	**196,122.00**

SERVICE EXPANSION

OPIATE TREATMENT SERVICES	TOTAL COST	MEDICAID/ OTHER FUNDED	HCHC Funding Needed
Assessment	$358,735.00	$310,427.00	$48,308.00
Laboratory Urinalysis	$566,020.00	$438,503.00	$127,517.00
Laboratory Urinalysis - MAT	$108,000.00	$64,800.00	$43,200.00
Individual Counseling	$740,172.00	$630,069.00	$110,103.00
Group Counseling	$899,140.00	$724,453.00	$174,687.00
Case Management	$424,817.00	$330,077.00	$94,740.00
Crisis Intervention	$53,909.00	$45,518.00	$8,391.00
Intensive Outpatient	$1,435,640.00	$1,098,199.00	$337,441.00
Family Counseling	$60,965.00	$49,098.00	$11,867.00
Medical/Somatic	$318,311.00	$247,909.00	$70,402.00
Methadone Administration	$885,500.00	$796,950.00	$88,550.00
Medication-Assisted Treatment	$663,843.00	$459,267.00	$204,576.00
Sub-Acute Detox	$600,600.00		$600,600.00
Non-Medical Community Residential	$293,760.00	$216,120.00	$77,640.00
buprenorphone/naloxone services (no meds)	$429,000.00	$39,875.00	$389,125.00
Recovery Supports	62,400.00		$62,400.00
Room & Board	$1,088,506.00	$769,330.00	$319,176.00
TOTAL TREATMENT SERVICES	**$8,989,318.00**	**$6,220,595.00**	**$2,768,723.00**

PREVENTION & COMMUNITY SERVICES	TOTAL COST	OTHER FUNDED	OTHER HEROIN FUNDING NEEDED
Referral & Information	55,579.00	17,576.00	38,003.00
AOD Hotline	72,000.00		72,000.00
Outreach	60,723.00	54,042.00	6,681.00
Consultation	34,181.00		34,181.00
Information Dissemination	33,258.00	14,207.00	19,051.00
Education	70,189.00	56,862.00	13,327.00
Education (Family Support Group)	8,688.00		8,688.00
Education (Nalaxone nurse education)	4,500.00		4,500.00
Community-Based Process	32,195.00	20,342.00	11,853.00
Environmental	27,364.00	22,804.00	4,560.00
Problem Identification and Referral	69,719.00	50,383.00	19,336.00
Alternatives	12,916.00	8,614.00	4,302.00
Recovery Supports (Nalaxone Kits)	8,500.00		8,500.00
TOTAL PREVENTION & COMMUNITY SERVICES	**489,812.00**	**244,830.00**	**244,982.00**

How is heroin linked to prescription drug abuse?
See page 3.

National Institute on Drug Abuse

Research Report Series

from the director:

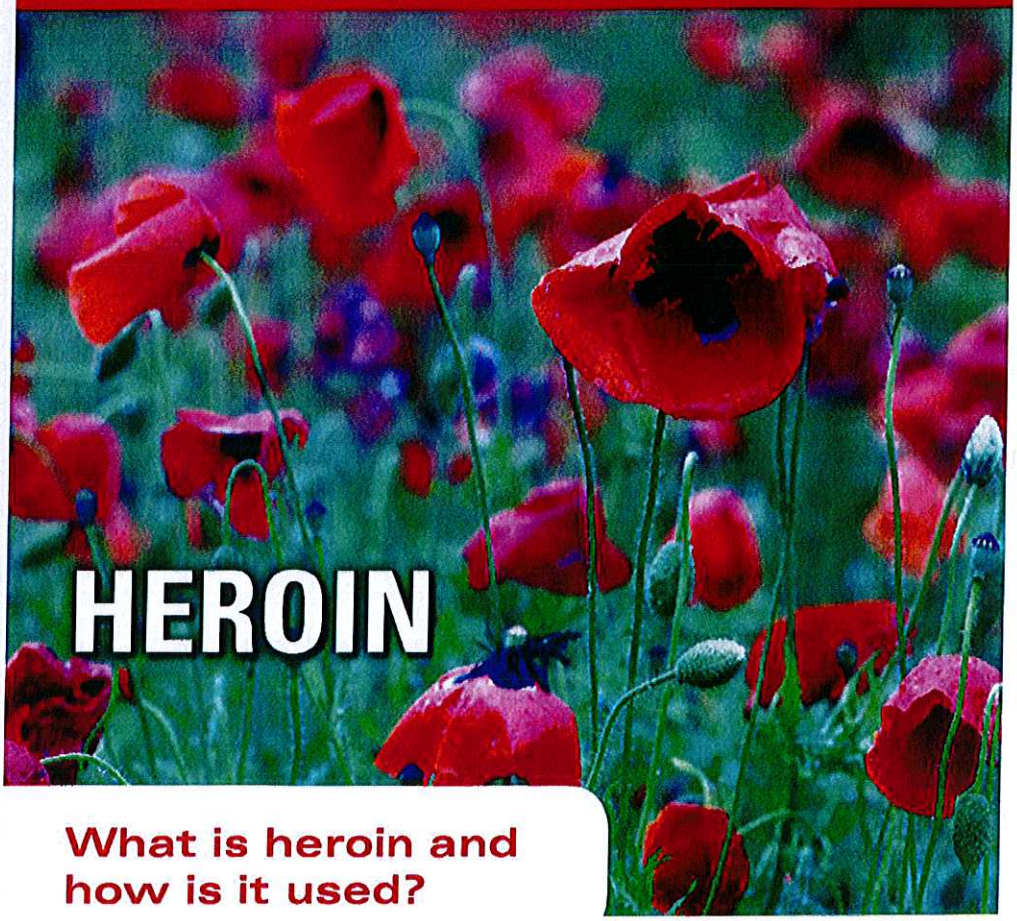
Heroin is a highly addictive opioid drug, and its use has repercussions that extend far beyond the individual user. The medical and social consequences of drug use—such as hepatitis, HIV/AIDS, fetal effects, crime, violence, and disruptions in family, workplace, and educational environments—have a devastating impact on society and cost billions of dollars each year.

Although heroin use in the general population is rather low, the numbers of people starting to use heroin have been steadily rising since 2007.[1] This may be due in part to a shift from abuse of prescription pain relievers to heroin as a readily available, cheaper alternative[2-5] and the misperception that highly pure heroin is safer than less pure forms because it does not need to be injected.

Like many other chronic diseases, addiction can be treated. Medications are available to treat heroin addiction while reducing drug cravings and withdrawal symptoms, improving the odds of achieving abstinence. There are now a variety of medications that can be tailored to a person's recovery needs while taking into account co-occurring health conditions. Medication combined with behavioral therapy is particularly effective, offering hope to individuals who suffer from addiction and for those around them.

The National Institute on Drug Abuse (NIDA) has developed this publication to provide an overview of heroin use and its consequences as well as treatment options available for those struggling with heroin addiction. We hope this compilation of scientific information on heroin will help to inform readers about the harmful effects of heroin as well as assist in prevention and treatment efforts.

Nora D. Volkow, M.D.
Director
National Institute on Drug Abuse

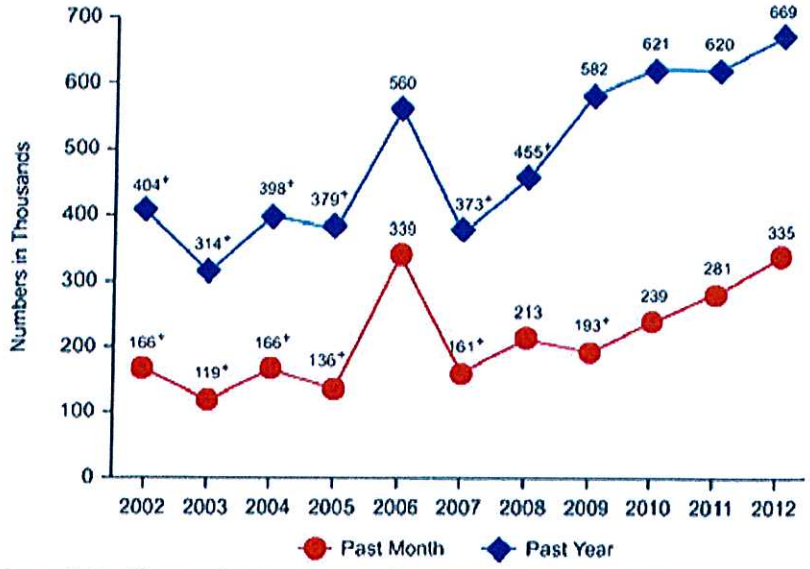


HEROIN

What is heroin and how is it used?

Heroin is an illegal, highly addictive drug processed from morphine, a naturally occurring substance extracted from the seed pod of certain varieties of poppy plants. It is typically sold as a white or brownish powder that is "cut" with sugars, starch, powdered milk, or quinine. Pure heroin is a white powder with a bitter taste that predominantly originates in South America and, to a lesser extent, from Southeast Asia, and dominates U.S. markets east of the Mississippi River.[3] Highly pure heroin can be snorted or smoked and may be more appealing to new users because it eliminates the stigma associated with injection drug use. "Black tar" heroin is sticky like roofing tar or hard like coal and is predominantly produced in Mexico and sold in U.S. areas west of the Mississippi River.[3] The dark color associated with black tar heroin results from crude processing methods that leave behind impurities. Impure heroin is usually dissolved, diluted, and injected into veins, muscles, or under the skin.

Past Month and Past Year Heroin Use among Persons Aged 12 or Older: 2002-2012



Source: National Survey on Drug Use and Health: Summary of National Findings, 2012.

What is the scope of heroin use in the United States?

According to the National Survey on Drug Use and Health (NSDUH), in 2012 about 669,000 Americans reported using heroin in the past year,[1] a number that has been on the rise since 2007. This trend appears to be driven largely by young adults aged 18–25 among whom there have been the greatest increases. The number of people using heroin for the first time is unacceptably high, with 156,000 people starting heroin use in 2012, nearly double the number of people in 2006 (90,000). In contrast, heroin use has been declining among teens aged 12–17. Past-year heroin use among the Nation's 8th-, 10th-, and 12th-graders is at its lowest levels in the history of the Monitoring the Future survey, at less than 1 percent of those surveyed in all 3 grades from 2005 to 2013.[6]

It is no surprise that with heroin use on the rise, more people are experiencing negative health effects that occur from repeated use. The number of people meeting Diagnostic and Statistical Manual of Mental Disorders, 4th edition (DSM-IV) criteria for dependence or abuse of heroin doubled from 214,000 in 2002 to 467,000 in 2012.[1] The recently released DSM-V no longer separates substance abuse from dependence, but instead provides criteria for opioid use disorders that range from mild to severe, depending on the number of symptoms a person has.[7] Data on the scope and severity of opioid use disorders in the United States are not yet available for these new criteria.

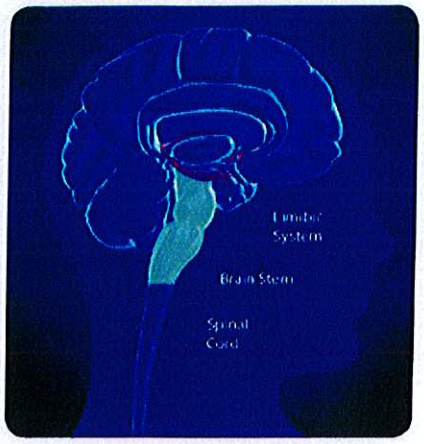
The impact of heroin use is felt all across the United States, with heroin being identified as the most or one of the most important drug abuse issues affecting several local regions from coast to coast. The rising harm associated with heroin use at the community level was presented in a report produced by the NIDA Community Epidemiology Work Group (CEWG). The CEWG is comprised of researchers from major metropolitan areas in the United States and selected foreign countries and provides community-level surveillance of drug abuse and its consequences to identify emerging trends.[3]

Heroin use no longer predominates solely in urban areas. Several suburban and rural communities near Chicago and St. Louis report increasing amounts of heroin seized by officials as well as increasing numbers of overdose deaths due to heroin use. Heroin use is also on the rise in many urban areas among young adults aged 18-25.[8] Individuals in this age group seeking treatment for heroin abuse increased from 11 percent of total admissions in 2008 to 26 percent in the first half of 2012.

What effects does heroin have on the body?

Heroin binds to and activates specific receptors in the brain called mu-opioid receptors (MORs). Our bodies contain naturally occurring chemicals called neurotransmitters that bind to these receptors throughout the brain and body to regulate pain, hormone release, and feelings of well-being.[9] When MORs are activated in the reward center of the brain, they stimulate the release of the neurotransmitter dopamine, causing a sensation of pleasure.[10] The consequences of activating opioid receptors with externally administered opioids such as heroin (versus naturally occurring chemicals within our bodies) depend on a variety of factors: how much is used, where in the brain or body it binds, how strongly it binds and for how long, how quickly it gets there, and what happens afterward.

The greatest increase in heroin use is seen in young adults aged 18-25.



Opioids Act on Many Places in the Brain and Nervous System

- Opioids can depress breathing by changing neurochemical activity in the brain stem, where automatic body functions such as breathing and heart rate are controlled.
- Opioids can increase feelings of pleasure by altering activity in the limbic system, which controls emotions.
- Opioids can block pain messages transmitted through the spinal cord from the body.

What are the immediate (short-term) effects of heroin use?

Once heroin enters the brain, it is converted to morphine and binds rapidly to opioid receptors.[11] Abusers typically report feeling a surge of pleasurable sensation—a "rush." The intensity of the rush is a function of how much drug is taken and how rapidly the drug enters the brain and binds to the opioid receptors. With heroin, the rush is usually accompanied by a warm flushing of the skin, dry mouth, and a heavy feeling in the extremities, which may be accompanied by nausea, vomiting, and severe itching. After the initial effects, users usually will be drowsy for several hours; mental function is clouded; heart function slows; and breathing is also severely slowed, sometimes enough to be life-threatening. Slowed breathing can also lead to coma and permanent brain damage.[12]

What are the long-term effects of heroin use?

Repeated heroin use changes the physical structure[13] and physiology of the brain, creating long-term imbalances in neuronal and hormonal systems that are not easily reversed.[14,15] Studies have shown some deterioration of the brain's white matter due to heroin use, which may affect decision-making abilities, the ability to regulate behavior, and responses to stressful situations.[16-18] Heroin also produces profound degrees of tolerance and physical dependence. Tolerance occurs when more and more of the drug is required to achieve the same effects. With physical dependence, the body adapts to the presence of the drug and withdrawal symptoms occur if use is reduced abruptly. Withdrawal may occur within a few hours after the last time the drug is taken. Symptoms of withdrawal include restlessness, muscle and bone pain, insomnia, diarrhea, vomiting, cold flashes with goose bumps ("cold turkey"), and leg movements. Major withdrawal symptoms peak between 24–48 hours after the last dose of heroin and subside after about a week. However, some people have shown persistent withdrawal signs for many months. Finally, repeated heroin use often results in addiction—a chronic relapsing disease that goes beyond physical dependence and is characterized by uncontrollable drug-seeking no matter the consequences.[19] Heroin is extremely addictive no matter how it is administered, although routes of administration that allow it to reach the brain the fastest (i.e., injection and smoking) increase the risk of addiction. Once a person becomes addicted to heroin, seeking and using the drug becomes their primary purpose in life.

How is heroin linked to prescription drug abuse?

Harmful health consequences resulting from the abuse of opioid medications that are prescribed for the treatment of pain, such as Oxycontin®, Vicodin®, and Demerol®, have dramatically increased in recent years. For example, unintentional poisoning deaths from prescription opioids quadrupled from 1999 to 2010 and now outnumber those from heroin and cocaine combined.[20] People often assume prescription pain relievers are safer than illicit drugs because they are medically prescribed; however, when these drugs are taken for reasons or in ways or amounts not intended by a doctor, or taken by someone other than the person for whom they are prescribed, they can result in severe adverse health effects including addiction, overdose, and death, especially when combined with other drugs or alcohol. Research now suggests that abuse of these medications may actually open the door to heroin use. Nearly half

of young people who inject heroin surveyed in three recent studies reported abusing prescription opioids before starting to use heroin. Some individuals reported switching to heroin because it is cheaper and easier to obtain than prescription opioids.[2-4]

What are the medical complications of chronic heroin use?

No matter how they ingest the drug, chronic heroin users experience a variety of medical complications including insomnia and constipation. Lung complications (including various types of pneumonia and tuberculosis) may result from the poor health of the user as well as from heroin's effect of depressing respiration. Many experience mental disorders such as depression and antisocial personality disorder. Men often experience sexual dysfunction and women's menstrual cycles often become irregular. There are also specific consequences associated with different routes of administration. For example, people who repeatedly snort heroin can damage the mucosal tissues in their noses as well as perforate the nasal septum (the tissue that separates the nasal passages).

Medical consequences of chronic injection use include scarred and/or collapsed veins, bacterial infections of the blood vessels and heart valves, abscesses (boils), and other soft-tissue infections. Many of the additives in street heroin may include substances that do not readily dissolve and result in clogging the blood vessels that lead to the lungs, liver, kidneys, or brain. This can cause infection or even death of small patches of cells in vital organs. Immune reactions to these or other contaminants can cause arthritis or other rheumatologic problems.

Sharing of injection equipment or fluids can lead to some of the most severe consequences of heroin abuse—infections with hepatitis B and C, HIV, and a host of other blood-borne viruses, which drug abusers can then pass on to their sexual partners and children.

Short- and Long-Term Effects of Heroin Use

Short-Term Effects

- "Rush"
- Depressed respiration
- Clouded mental functioning
- Nausea and vomiting
- Suppression of pain
- Spontaneous abortion

Long-Term Effects

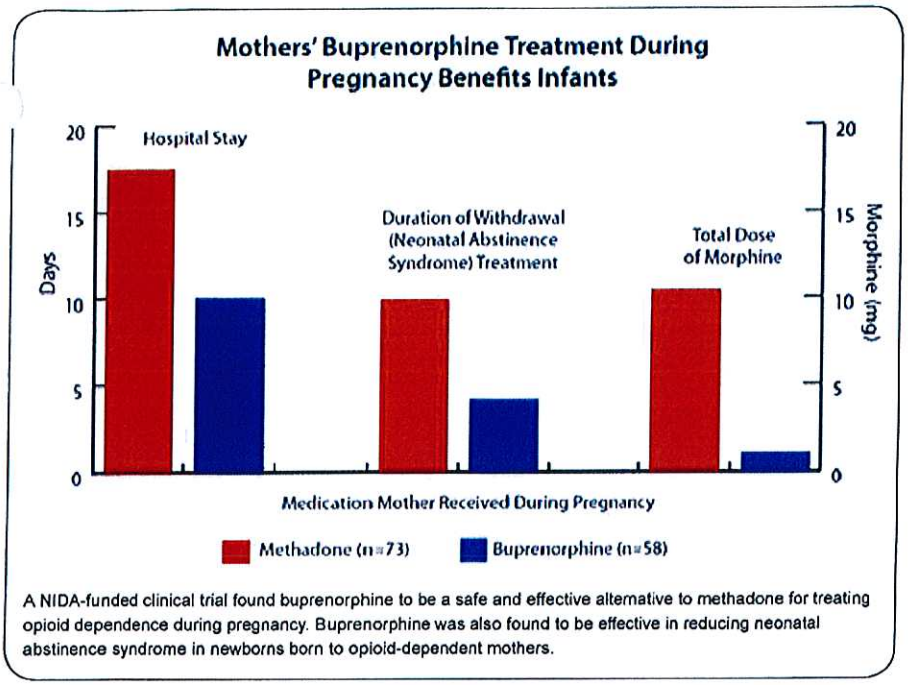
- Addiction
- Infectious disease (e.g., HIV, hepatitis B and C)
- Collapsed veins
- Bacterial infections
- Abscesses
- Infection of heart lining and valves
- Arthritis and other rheumatologic problems
- Liver and kidney disease

Why does heroin use create special risk for contracting HIV/AIDS and hepatitis B and C?

Heroin use increases the risk of being exposed to HIV, viral hepatitis, and other infectious agents through contact with infected blood or body fluids (e.g., semen, saliva) that results from the sharing of syringes and injection paraphernalia that have been used by infected individuals or through unprotected sexual contact with an infected person. Snorting or smoking does not eliminate the risk of infectious disease like hepatitis and HIV/AIDS because people under the influence of drugs still engage in risky sexual and other behaviors that can expose them to these diseases.

Injection drug users (IDUs) are the highest-risk group for acquiring hepatitis C (HCV) infection and continue to drive the escalating HCV epidemic: Each IDU infected with HCV is likely to infect 20 other people.[21] Of the 17,000 new HCV infections occurring in the United States in 2010, over half (53 percent) were among IDUs.[22] Hepatitis B (HBV) infection in IDUs was reported to be as high as 20 percent in the United States in 2010,[23] which is particularly disheartening since an effective vaccine that protects against HBV infection is available. There is currently no vaccine available to protect against HCV infection.

Drug use, viral hepatitis and other infectious diseases, mental illnesses, social dysfunctions, and stigma are often co-occuring conditions that affect one another, creating more complex health challenges that require comprehensive treatment plans tailored to meet all of a patient's needs. For example, NIDA-funded research has found that drug abuse treatment along with HIV prevention and community-based outreach programs can help people who use drugs change the behaviors that put them at risk for contracting HIV and other infectious diseases. They can reduce drug use and drug-related risk behaviors such as needle

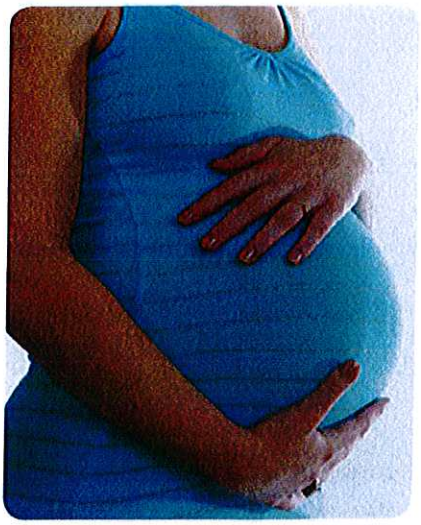


A NIDA-funded clinical trial found buprenorphine to be a safe and effective alternative to methadone for treating opioid dependence during pregnancy. Buprenorphine was also found to be effective in reducing neonatal abstinence syndrome in newborns born to opioid-dependent mothers.

sharing and unsafe sexual practices and, in turn, reduce the risk of exposure to HIV/AIDS and other infectious diseases. Only through coordinated utilization of effective antiviral therapies coupled with treatment for drug abuse and mental illness can the health of those suffering from these conditions be restored.

How does heroin use affect pregnant women?

Heroin use during pregnancy can result in neonatal abstinence syndrome (NAS). NAS occurs when heroin passes through the placenta to the fetus during pregnancy, causing the baby to become dependent along with the mother. Symptoms include excessive crying, fever, irritability, seizures, slow weight gain, tremors, diarrhea, vomiting, and possibly death. NAS requires hospitalization and treatment with medication (often morphine) to relieve symptoms; the medication is gradually tapered off until the baby adjusts to being opioid-free. Methadone maintenance combined with prenatal care and a comprehensive drug treatment program can improve many of the outcomes associated with untreated heroin use for both the infant and mother, although infants exposed to methadone during



pregnancy typically require treatment for NAS as well.

A recent NIDA-supported clinical trial demonstrated that buprenorphine treatment of opioid-dependent mothers is safe for both the unborn child and the mother. Once born, these infants require less morphine and shorter hospital stays as compared to infants born of mothers on methadone maintenance treatment.[24] Research also indicates that buprenorphine combined with naloxone (compared to a morphine taper) is equally safe for treating babies born with NAS, further reducing side effects experienced by infants born to opioid-dependent mothers.[25,26]

What can be done for a heroin overdose?

Overdose is a dangerous and deadly consequence of heroin use. A large dose of heroin depresses heart rate and breathing to such an extent that a user cannot survive without medical help. Naloxone (e.g., Narcan®) is an opioid receptor antagonist medication that can eliminate all signs of opioid intoxication to reverse an opioid overdose. It works by rapidly binding to opioid receptors, preventing heroin from activating them.[27] Because of the huge increase in overdose deaths from prescription opioid abuse, there has been greater demand for opioid overdose prevention services. Naloxone that can be used by nonmedical personnel has been shown to be cost-effective and save lives.[28] In April 2014, the U.S. Food and Drug Administration (FDA) approved a naloxone hand-held auto-injector called Evzio, which rapidly delivers a single dose of naloxone into the muscle or under the skin, buying time until medical assistance can arrive. Since Evzio can be used by family members or caregivers, it greatly expands access to naloxone.[29] NIDA and the FDA are working with drug manufacturers to support the development of nasal spray formulations of this live-saving medication.

In addition, the Substance Abuse and Mental Health Services Administration (SAMHSA) released an Opioid Overdose Prevention Toolkit in August 2013 that provides helpful information necessary to develop policies and practices to prevent opioid-related overdoses and deaths. The kit provides material tailored for first responders, treatment providers, and individuals recovering from an opioid overdose.

What are the treatments for heroin addiction?

A variety of effective treatments are available for heroin addiction, including both behavioral and pharmacological (medications). Both approaches help to restore a degree of normalcy to brain function and behavior, resulting in increased employment rates and lower risk of HIV and other diseases and criminal behavior. Although behavioral and pharmacologic treatments can be extremely useful when utilized alone, research shows that for some people, integrating both types of treatments is the most effective approach.

Pharmacological Treatment (Medications)

Scientific research has established that pharmacological treatment of opioid addiction increases retention in treatment programs and decreases drug use, infectious disease transmission, and criminal activity.

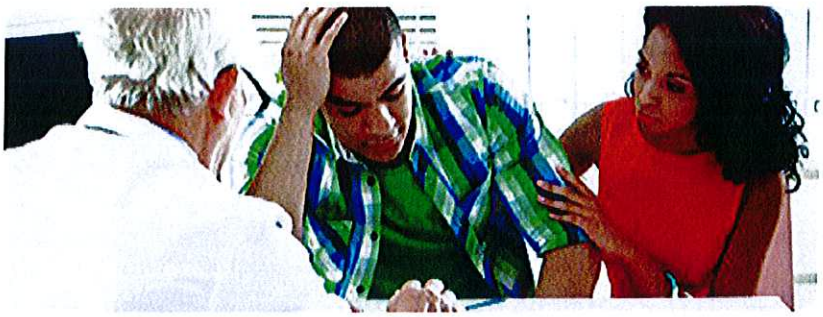
When people addicted to opioids first quit, they undergo withdrawal symptoms (pain, diarrhea, nausea, and vomiting), which may be severe. Medications can be helpful in this detoxification stage to ease craving and other physical symptoms, which often prompt a person to relapse. While not a treatment for addiction itself, detoxification is a useful first step when it is followed by some form of evidence-based treatment.

Medications developed to treat opioid addiction work through the same opioid receptors as the addictive drug, but are safer and less likely to produce the harmful behaviors that characterize addiction. Three types of medications include: (1) agonists, which activate opioid receptors; (2) partial agonists, which also activate opioid receptors but produce a smaller response; and (3) antagonists, which block the receptor and interfere with the rewarding effects of opioids. A particular medication is used based on a patient's specific medical needs and other factors. Effective medications include:

- Methadone (Dolophine® or Methadose®) is a slow-acting opioid agonist. Methadone is taken orally so that it reaches the brain slowly, dampening the "high" that occurs with other routes of administration while preventing withdrawal symptoms. Methadone has been used since the 1960s to treat heroin addiction and is still an excellent treatment option, particularly for patients who do not respond well to other medications. Methadone is only available through approved outpatient treatment programs, where it is dispensed to patients on a daily basis.
- Buprenorphine (Subutex®) is a partial opioid agonist. Buprenorphine relieves drug cravings without producing the "high" or dangerous side effects of other opioids. Suboxone® is a novel formulation of buprenorphine that is taken orally or sublingually and contains naloxone (an opioid antagonist) to prevent attempts to get high by injecting the medication. If an addicted patient were to inject Suboxone, the naloxone would induce withdrawal symptoms, which are averted when taken orally as prescribed. FDA approved buprenorphine in 2002, making it the first medication eligible to be prescribed by certified physicians through the Drug Addiction Treatment Act. This approval eliminates the need to visit specialized treatment clinics, thereby expanding access to treatment for many who need it. In February 2013, FDA approved two generic forms of Suboxone, making this treatment option more affordable.
- Naltrexone (Depade® or Revia®) is an opioid antagonist. Naltrexone blocks the action of opioids, is not addictive or sedating, and does not result in physical dependence; however, patients often have trouble complying with the treatment, and this has limited its effectiveness. An injectable long-acting formulation of naltrexone (Vivitrol®) recently received FDA approval for treating opioid addiction. Administered once a month, Vivitrol® may improve compliance by eliminating the need for daily dosing.

Behavioral Therapies

The many effective behavioral treatments available for heroin addiction can be delivered in outpatient and residential settings. Approaches such as contingency management and cognitive-behavioral therapy have been shown to effectively treat heroin addiction, especially when applied in concert with medications. Contingency management uses a voucher-based system in which patients earn "points" based on negative drug tests, which they can exchange for items that encourage healthy living. Cognitive-behavioral therapy is designed to help modify the patient's expectations and behaviors related to drug use and to increase skills in coping with various life stressors. An important task is to match the best treatment approach to meet the particular needs of the patient.



Glossary

Addiction: A chronic, relapsing disease, characterized by compulsive drug seeking and use accompanied by neurochemical and molecular changes in the brain.

Agonist: A chemical compound that mimics the action of a natural neurotransmitter and binds to the same receptor on nerve cells to produce a biological response.

Antagonist: A drug that binds to the same nerve cell receptor as the natural neurotransmitter but does not activate the receptor, instead blocking the effects of another drug.

Buprenorphine: A partial opioid agonist for the treatment of opioid addiction that relieves drug cravings without producing the "high" or dangerous side effects of other opioids.

Craving: A powerful, often uncontrollable desire for drugs.

Detoxification: A process of allowing the body to rid itself of a drug while managing the symptoms of withdrawal; often the first step in a drug treatment program.

Methadone: A long-acting opioid agonist medication shown to be effective in treating heroin addiction.

Naloxone: An opioid receptor antagonist that rapidly binds to opioid receptors, blocking heroin from activating them. An appropriate dose of naloxone acts in less than 2 minutes and completely eliminates all signs of opioid intoxication to reverse an opioid overdose.

Naltrexone: An opioid antagonist medication that can only be used after a patient has completed detoxification. Naltrexone is not addictive or sedating and does not result in physical dependence; however, poor patient compliance has limited its effectiveness. A new, long-acting form of naltrexone called Vivitrol® is now available that is injected once per month, eliminating the need for daily dosing, improving patient compliance.

Neonatal abstinence syndrome (NAS): NAS occurs when heroin from the mother passes through the placenta into the baby's bloodstream during pregnancy, allowing the baby to become addicted along with the mother. NAS requires hospitalization and treatment with medication (often a morphine taper) to relieve symptoms until the baby adjusts to becoming opioid-free.

Opioid: A natural or synthetic psychoactive chemical that binds to opioid receptors in the brain and body. Natural opioids include morphine and heroin (derived from the opium poppy) as well as opioids produced by the human body (e.g., endorphins); semi-synthetic or synthetic opioids include analgesics such as oxycodone, hydrocodone, and fentanyl.

Opioid use disorder: A problematic pattern of opioid drug use, leading to clinically significant impairment or distress that includes cognitive, behavioral, and physiological symptoms as defined by the new Diagnostic and Statistical Manual of Mental Disorders, 5th edition (DSM-V) criteria. Diagnosis of an opioid use disorder can be mild, moderate, or severe depending on the number of symptoms a person experiences. Tolerance or withdrawal symptoms that occur during medically supervised treatment are specifically excluded from an opioid use disorder diagnosis.

Partial agonist: A substance that binds to and activates the same nerve cell receptor as a natural neurotransmitter but produces a diminished biological response.

Physical dependence: An adaptive physiological state that occurs with regular drug use and results in a withdrawal syndrome when drug use is stopped; usually occurs with tolerance.

Rush: A surge of euphoric pleasure that rapidly follows administration of a drug.

Tolerance: A condition in which higher doses of a drug are required to produce the same effect as during initial use; often leads to physical dependence.

Withdrawal: A variety of symptoms that occur after use of an addictive drug is reduced or stopped.

References

1. Substance Abuse and Mental Health Services Administration. *Results from the 2012 National Survey on Drug Use and Health: Summary of National Findings.* Rockville, MD: Substance Abuse and Mental Health Services Administration, 2013.
2. Cicero, T.J.; Ellis, M.S.; and Surratt, H.L. Effect of abuse-deterrent formulation of OxyContin. *N Engl J Med* 367(2):187–189, 2012.
3. National Institute on Drug Abuse. Epidemiologic Trends in Drug Abuse, in *Proceedings of the Community Epidemiology Work Group,* January 2012. Bethesda, MD: National Institute on Drug Abuse, 66.
4. Pollini, R.A.; Banta-Green, C.J.; Cuevas-Mota, J.; Metzner, M.; Teshale, E.; and Garfein, R.S. Problematic use of prescription-type opioids prior to heroin use among young heroin injectors. *Subst Abuse Rehabil* 2(1):173–180, 2011.
5. Lankenau, S.E.; Teti, M.; Silva, K.; Jackson Bloom, J.; Harocopos, A.; and Treese, M. Initiation into prescription opioid misuse amongst young injection drug users. *Int J Drug Policy* 23(1):37–44, 2012.
6. Johnston, L.D.; O'Malley, P.M.; Bachman, J.G.; and Schulenberg, J.E. *Monitoring the Future National Results on Adolescent Drug Use: Overview of Key Findings, 2013.* Bethesda, MD: National Institute on Drug Abuse, 2013. Available at www.monitoringthefuture.org
7. American Psychiatric Association. *Substance-Related and Addictive Disorders, in Diagnostic and Statistical Manual of Mental Disorders,* 5th Edition. Washington, DC: American Psychiatric Publishing, 540–550, 2013.
8. National Institute on Drug Abuse, Community Epidemiology Working Group. Epidemiologic Trends in Drug Abuse, in *Proceedings of the Community Epidemiology Work Group,* January 2014, Bethesda, MD: National Institute on Drug Abuse. In preparation.
9. Waldhoer, M.; Bartlett, S.E.; and Whistler, J.L. Opioid receptors. *Annu Rev Biochem* 73: 953–990, 2004.
10. Johnson, S.W.; and North, R.A. Opioids excite dopamine neurons by hyperpolarization of local interneurons. *J Neurosci* 12(2):483–488, 1992.
11. Goldstein, A. Heroin addiction: neurobiology, pharmacology, and policy. *J Psychoactive Drugs* 23(2):123–133, 1991.
12. National Library of Medicine. Cerebral hypoxia. Available at: http://www.nlm.nih.gov/medlineplus/ency/article/001435.htm. Updated: August 29, 2012. Last accessed: October 30, 2014.
13. Wang, X.; Li, B.; Zhou, X.; Liao, Y.; Tang, J.; Liu, T.; Hu, D.; and Hao, W. Changes in brain gray matter in abstinent heroin addicts. *Drug Alcohol Depend* 126(3):304–308, 2012.
14. Ignar, D.M.; and Kuhn, C.M. Effects of specific mu and kappa opiate tolerance and abstinence on hypothalamo-pituitary-adrenal axis secretion in the rat. *J Pharmacol Exp Ther* 255(3):1287–1295, 1990.
15. Kreek, M.J.; Ragunath, J.; Plevy, S.; Hamer, D.; Schneider, B.; and Hartman, N. ACTH, cortisol and beta-endorphin response to metyrapone testing during chronic methadone maintenance treatment in humans. *Neuropeptides* 5(1-3):277–278, 1984.
16. Li, W.; Li, Q.; Zhu, J.; Qin, Y.; Zheng, Y.; Chang, H.; Zhang, D.; Wang, H.; Wang, L.; Wang, Y.; Wang, W. White matter impairment in chronic heroin dependence: a quantitative DTI study. Brain Res 1531:58-64, 2013.
17. Qiu, Y.; Jiang, G.; Su, H.; Lv, X.; Zhang, X.; Tian, J.; Zhou, F. Progressive white matter microstructure damage in male chronic heroin dependent individuals: a DTI and TBSS study. PLoS One 8(5):e63212, 2013.
18. Liu, J.; Qin, W.; Yuan, K.; Li, J.; Wang, W.; Li, Q.; Wang, Y.; Sun, J.; von Deneen, K.M.; Liu, Y.; Tian, J. Interaction between dysfunctional connectivity at rest and heroin cues-induced brain responses in male abstinent heroin-dependent individuals. PLoS One 6(10):e23098, 2011.
19. Kreek, M.J.; Levran, O.; Reed, B.; Schlussman, S.D.; Zhou, Y.; and Butelman, E.R. Opiate addiction and cocaine addiction: underlying molecular neurobiology and genetics. *J Clin Invest* 122(10):3387–3393, 2012.
20. Chen, L.H.; Hedegaard, H.; and Warner, M. QuickStats: Number of Deaths from Poisoning, Drug Poisoning, and Drug Poisoning Involving Opioid Analgesics - United States, 1999–2010. *Morbidity and Mortality Weekly Report* 234, 2013.
21. Magiorkinis, G.; Sypsa, V.; Magiorkinis, E.; Paraskevis, D.; Katsoulidou, A.; Belshaw, R.; Fraser, C.; Pybus, O.G.; and Hatzakis, A. Integrating phylodynamics and epidemiology to estimate transmission diversity in viral epidemics. *PLoS Comput Biol* 9(1):e1002876, 2013.
22. Centers for Disease Control and Prevention. *Viral Hepatitis Surveillance - United States, 2010.* Atlanta, GA: Centers for Disease Control and Prevention, 2012.
23. Nelson, P.K.; Mathers, B.M.; Cowie, B.; Hagan, H.; Des Jarlais, D.; Horyniak, D.; and Degenhardt, L. Global epidemiology of hepatitis B and hepatitis C in people who inject drugs: results of systematic reviews. *Lancet* 378(9791):571–583, 2011.
24. Jones, H.E.; Kaltenbach, K.; Heil, S.H.; Stine, S.M.; Coyle, M.G.; Arria, A.M.; O'Grady, K.E.; Selby, P.; Martin, P.R.; and Fischer, G. Neonatal abstinence syndrome after methadone or buprenorphine exposure. *N Engl J Med* 363(24):2320–2331, 2010.
25. Kraft, W.K.; Dysart, K.; Greenspan, J.S.; Gibson, E.; Kaltenbach, K.; and Ehrlich, M.E. Revised dose schema of sublingual buprenorphine in the treatment of the neonatal opioid abstinence syndrome. *Addiction* 106(3):574–580, 2010.
26. Lund, I.O.; Fischer, G.; Welle-Strand, G.K.; O'Grady, K.E.; Debelak, K.; Morrone, W.R.; Jones, H.E. A comparison of buprenorphine + naloxone to buprenorphine and methadone in the treatment of opioid dependence during pregnancy: maternal and neonatal outcomes. *Subst Abuse* 7:61–74, 2013.
27. Boyer, E.W. Management of opioid analgesic overdose. *N Engl J Med* 367(2):146–155, 2012.
28. Coffin, P.O.; and Sullivan, S.D. Cost-effectiveness of distributing naloxone to heroin users for lay overdose reversal. *Ann Intern Med* 158(1):1–9, 2013.
29. U.S. Food and Drug Administration. FDA approves new hand-held auto-injector to reverse opioid overdose. *FDA News Release.* April 3, 2014. Available at http://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/ucm391465.htm.

Where can I get further information about heroin?

To learn more about heroin and other drugs of abuse, visit the NIDA Web site at **www.drugabuse.gov** or contact the *DrugPubs* Research Dissemination Center at 877-NIDA-NIH (877-643-2644; TTY/TDD: 240-645-0228).

NATIONAL INSTITUTE ON DRUG ABUSE
NIDA DRUGPUBS
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What's on the NIDA Web Site

- Information on drugs of abuse and related health consequences
- NIDA publications, news, and events
- Resources for health care professionals
- Funding information (including program announcements and deadlines)
- International activities
- Links to related Web sites (access to Web sites of many other organizations in the field)

NIDA Web Sites

www.drugabuse.gov
www.teens.drugabuse.gov
www.drugabuse.gov/drugs-abuse/heroin
www.easyread.drugabuse.gov
www.drugabuse.gov/publications/principles-adolescent-substance-use-disorder-treatment-research-based-guide

For Physician Information
NIDAMED
www.drugabuse.gov/nidamed

Other Web Sites

Information on heroin and addiction is also available through these other Web sites:

- Medication-Assisted Treatment for Opioid Addiction
  www.drugabuse.gov/publications/topics-in-brief/medication-assisted-treatment-opioid-addiction
- Prescription Drugs
  www.drugabuse.gov/drugs-abuse/prescription-drugs
- Medication-Assisted Treatment for Opioid Addiction
  www.samhsa.gov/samhsaNewsLetter/Volume_17_Number_5/TreatingOpioidAddiction.aspx

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